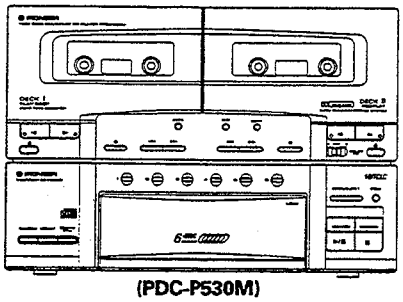
Service Manual

PIONEER®
The Art of Entertainment



(PDC-P530M)

ORDER NO.
ARP2670

CASSETTE DECK MULTI CD
PDC-P530M
CASSETTE DECK CD
PDC-P530

PDC-P530M AND PDC-P530 HAVE THE FOLLOWING:

Type	Model		Power Requirement	Remarks
	PDC-P530M	PDC-P530		
AEBMXJ	○	○	AC power supplied from power transformer's second-ary of other system component	
ADL	○	—		

- **This manual is applicable to the following: PDC-P530M/AEBMXJ and ADL; PDC-P530/AEBMXJ.**
- **These products are systems components.**
  Each of these products does not function properly when independent; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.
  These products' instructions are contained within the instruction manual of the related system component(s).
  The manual is packed with those component(s).
  These products' accessories etc. are packed with their related component(s).

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AN FEB. 1993 Printed in Japan

1. SAFETY INFORMATION

(FOR EUROPEAN MODEL ONLY)

VARO!
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.

ADVERSEL:
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLING.

VARNING!
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

LASER
Kuva 1
Lasersateilyn varoitusmerkki

WARNING!
DEVICE INCLUDES LASER DIODE WHICH EMITS INVISIBLE INFRARED RADIATION WHICH IS DANGEROUS TO EYES. THERE IS A WARNING SIGN ACCORDING TO PICTURE 1 INSIDE THE DEVICE CLOSE TO THE LASER DIODE.

LASER
Picture 1
Warning sign for laser radiation

IMPORTANT
THIS PIONEER APPARATUS CONTAINS LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS SHOULD BE DONE BY A SPECIALLY INSTRUCTED PERSON.

LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER: 5 mw
WAVELENGTH: 780-785 nm

LABEL CHECK

Additional Laser Caution

1. Laser Interlock Mechanism
   The position of the switch (S601) for detecting loading completion is detected by system microprocessor,and the design prevents laser diode oscillation when the switch (S601) is not in CLAMP terminal side (when CLMP signal is OFF, that is high level).
   Thus, the interlock will no longer function if the switch (S601) is deliberately connected to ground (low level). The interlock also dose not operate in the test mode *. Laser diode oscillation will continue, if pins 1 of M51593FP (IC101) on the preamplifier board loaded on pick up assembly are connected to GND, or pin 19 is connected to low level (ON),or else the terminals of Q101 are shorted to each other (fault condition).
2. when the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 or higher laser beam.

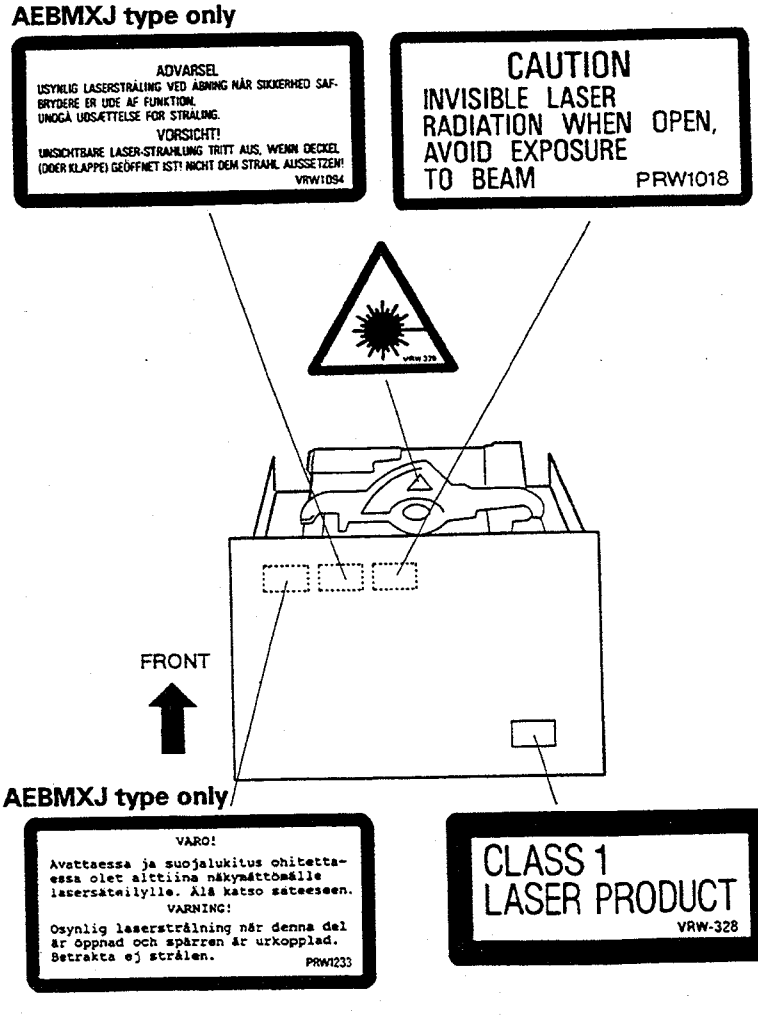
* Refer to page 41. PDC-P530

Additional Laser Caution

1. Laser Interlock Mechanism
   The ON/OFF (ON: low level / OFF: high level) status of the LPS1 (S601) and LPS2 (S602) switches for detecting the loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when both switches LPS1 and LPS2 are not ON (low level)(clamped state).
   Thus, interlock will no longer function if switches LPS1 (S601) and LPS2 (S602) are deliberately shorted. The interlock also dose not operate in the test mode *. Laser diode oscillation will continue, if pins 1 of M51593FP (IC101) on the preamplifier board loaded on pick up assembly are connected to GND, or pin 19 is connected to low level (ON),or else the terminals of Q101 are shorted to each other (fault condition).
2. when the cover is opened with the servo mechanism block removed to be turned over, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

* Refer to page 41. PDC-P530M

AEBMXJ type only


ADVARSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHED SAFBRYDERE ER UDE AF FUNKTION.
UNDGÅ UDSÆTTELSE FOR STRÅLING.
VORSICHT!
UNSICHTBARE LASER-STRAHLUNG TRITT AUS, WENN DECKEL (ODER KLAPPE) GEÖFFNET IST! NICHT DEM STRAHL AUSSETZEN!
VRW1094
CAUTION
INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM
PRW1018
FRONT
AEBMXJ type only
VARO!
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättömälle lasersäteilylle. Älä katso säteeseen.
VARNING!
Osynlig laserstrålning när denna del är öppnad och spärren är urkopplad. Betrakta ej strålen.
PRW1233
CLASS 1
LASER PRODUCT
VRW-328

2. DISASSEMBLY

● Checking the CD player operations

1. Remove the Bonnet.
2. Remove screws Ⓐ which hold the front panel and the binder which holds lead wires. (See Fig. 2 - 1.)
3. Pull the front panel towards you. (See Fig. 2 - 1.)

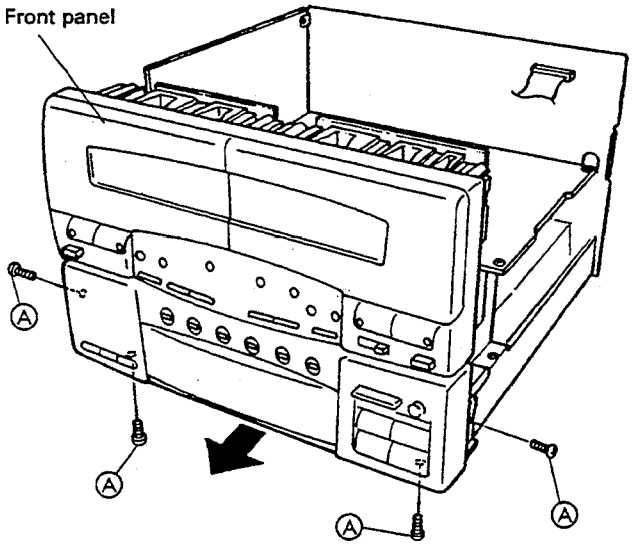


Fig. 2-1

4. Turn the front panel to the left. (See Fig. 2 - 2.)
5. Remove screws Ⓑ which hold the MAIN unit. (See Fig. 2 - 2.)

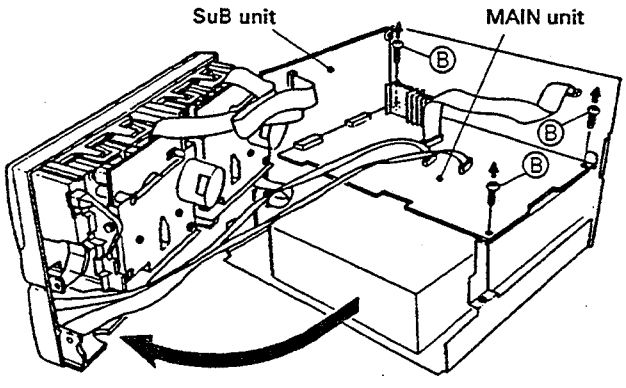


Fig. 2-2

6. Remove the MAIN unit from the SUB unit and set it on its edge. (See Fig. 2 - 3.)
7. In this status check the operations of the CD player.

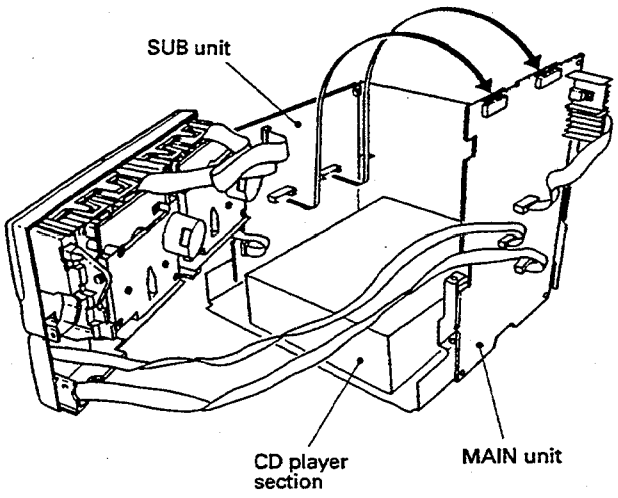


Fig. 2-3

3. EXPLODED VIEWS, PACKING AND PARTS LIST

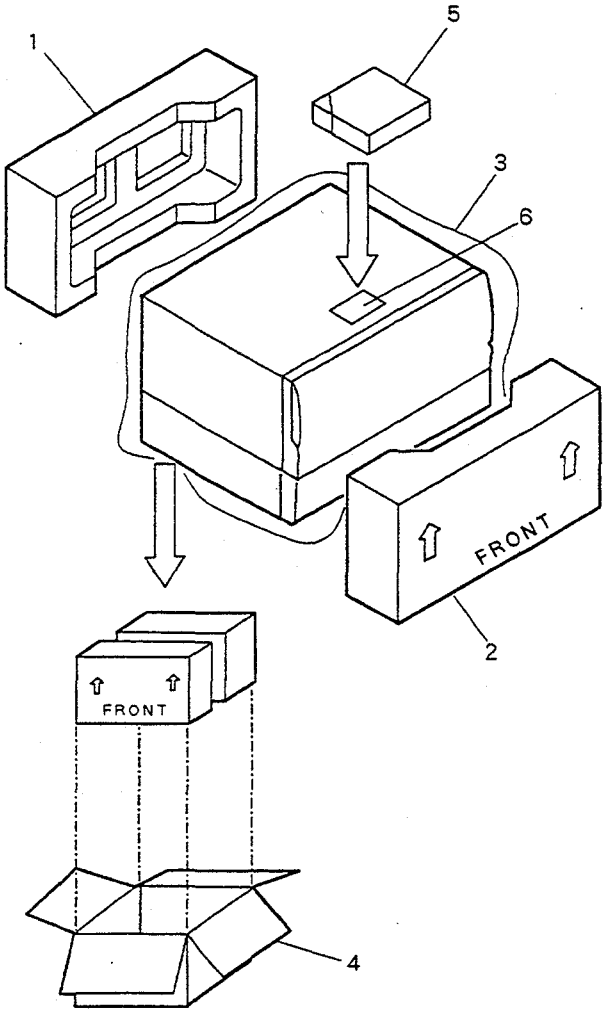
NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

3.1 PACKING

Parts List

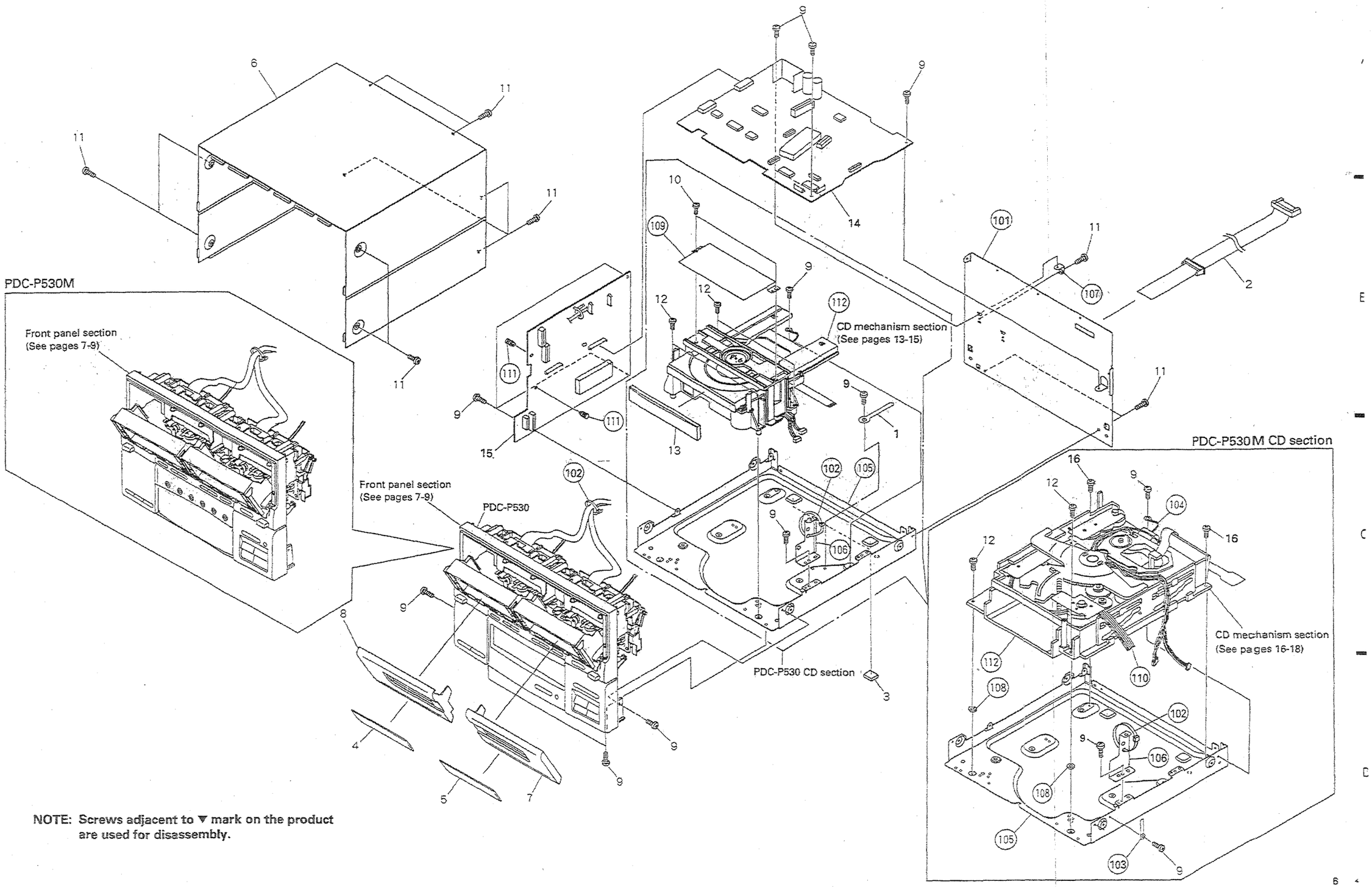
Mark	No.	Description	Part No.
	1	Pad R (plastics)	RHA1106
	2	Pad F (plastics)	RHA1105
	3	Sheet	RHC1021
	4	Packing case (paper) (PDC-P530M/AEBMXJ)	RHG1409
	4	Packing case (paper) (PDC-P530M/ADL)	RHG1483
	4	Packing case (paper) (PDC-P530/AEBMXJ)	RHG1407
	5	Magazine ass'y (PDC-P530M only)	PXA1504
	6	Caution card (AEBMXJ type only)	RRN1001



3.2 EXTERIOR

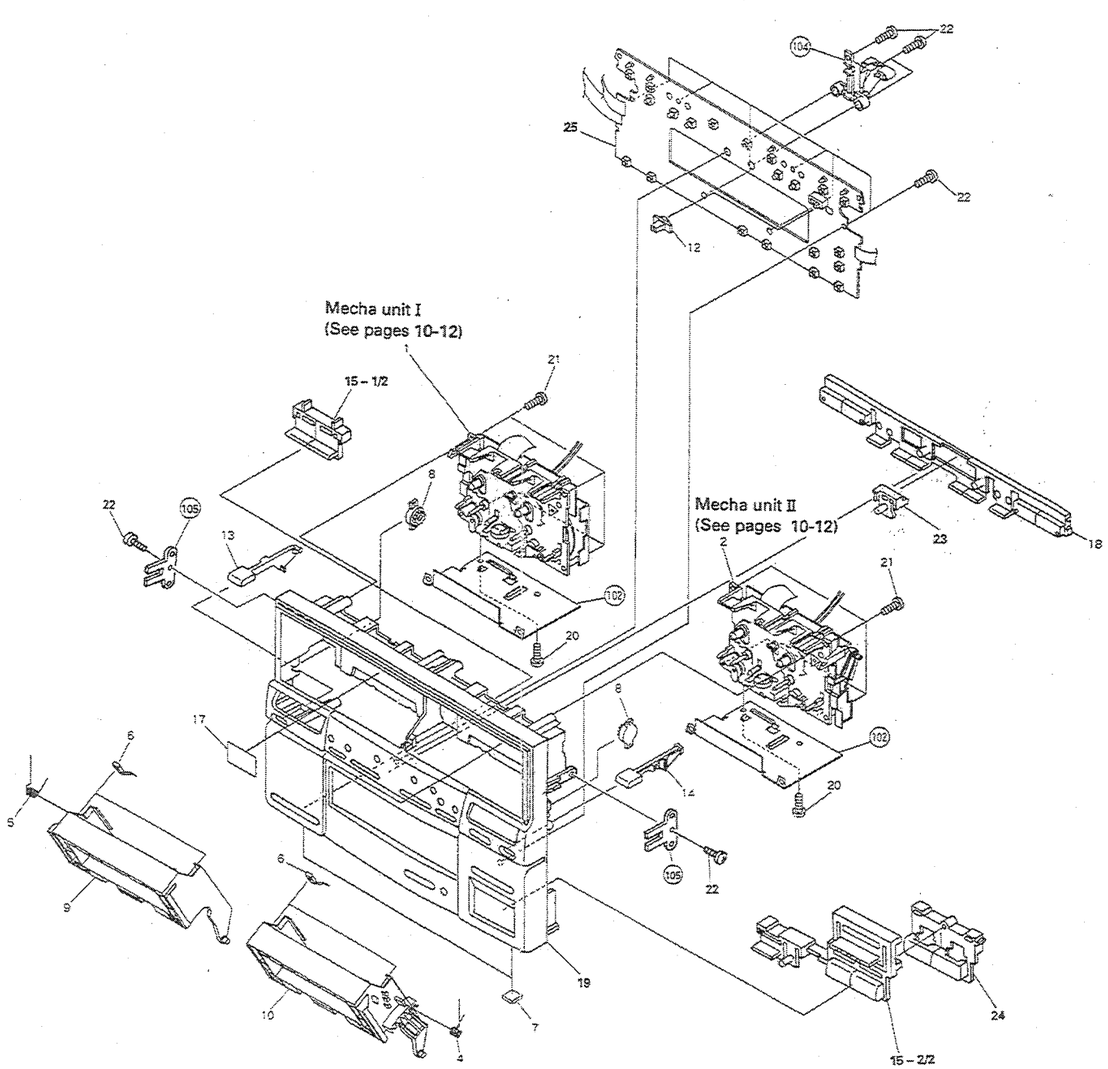
Parts List

Mark	No.	Description	Part No.
	1	Cord clamper (steel) (PDC-P530 only)	RNH-184
	2	Connector	RKP1504
	3	Cushion (rubber)	REB1004
	4	Door lens L (PVC)	RAH2145
	5	Door lens R (PVC)	RAH2146
	6	Bonnet	REA1046
	7	Door panel R (ABS) (PDC-P530M)	REA1040
	7	Door panel R (ABS) (PDC-P530)	REA1036
	8	Door panel L (ABS) (PDC-P530M)	REA1039
	8	Door panel L (ABS) (PDC-P530)	REA1035
	9	Screw	BBZ30P060FMC
	10	Screw	BBZ30P080FMC
	11	Screw	BBZ30P080FZK
	12	Screw (PDC-P530M)	IBZ30P100FZK
	12	Screw (PDC-P530)	BBZ30P160FZK
	13	Name plate (ABS) (PDC-P530 only)	RAH2155
	14	MAIN UNIT (PDC-P530M)	RWZ2862
	14	MAIN UNIT (PDC-P530)	RWZ2854
	15	SUB UNIT (PDC-P530M)	RWZ2863
	15	SUB UNIT (PDC-P530)	RWZ2855
	16	Screw	IBZ30P080FZK
NSP	101	Rear panel (FE) (PDC-P530M/AEBMXJ)	RNA1635
NSP	101	Rear panel (FE) (PDC-P530M/ADL)	RNA1710
NSP	101	Rear panel (FE) (PDC-P530/AEBMXJ)	RNA1633
NSP	102	Clamper	PEC-107
NSP	103	Cord clamper (PDC-P530M only)	DNF1128
NSP	104	Earth lead unit (PDC-P530M only)	XDF-504
NSP	105	Chassis (FE)	RNB1071
NSP	106	Angle (FE)	RNE1497
NSP	107	Bracket (FE)	RNE1498
NSP	108	Spacer (FE) (PDC-P530M only)	RNE1504
	109	.....	
NSP	109	Shield plate C (PDC-P530)	RNE1508
NSP	110	Parallel wire (PDC-P530M only)	D20PYY0625E
NSP	111	PC support B	VEC1179
NSP	112	Multi mecha ass'y (PDC-P530M)	PXA1469
NSP	112	Single mecha ass'y (PDC-P530)	PXA1487

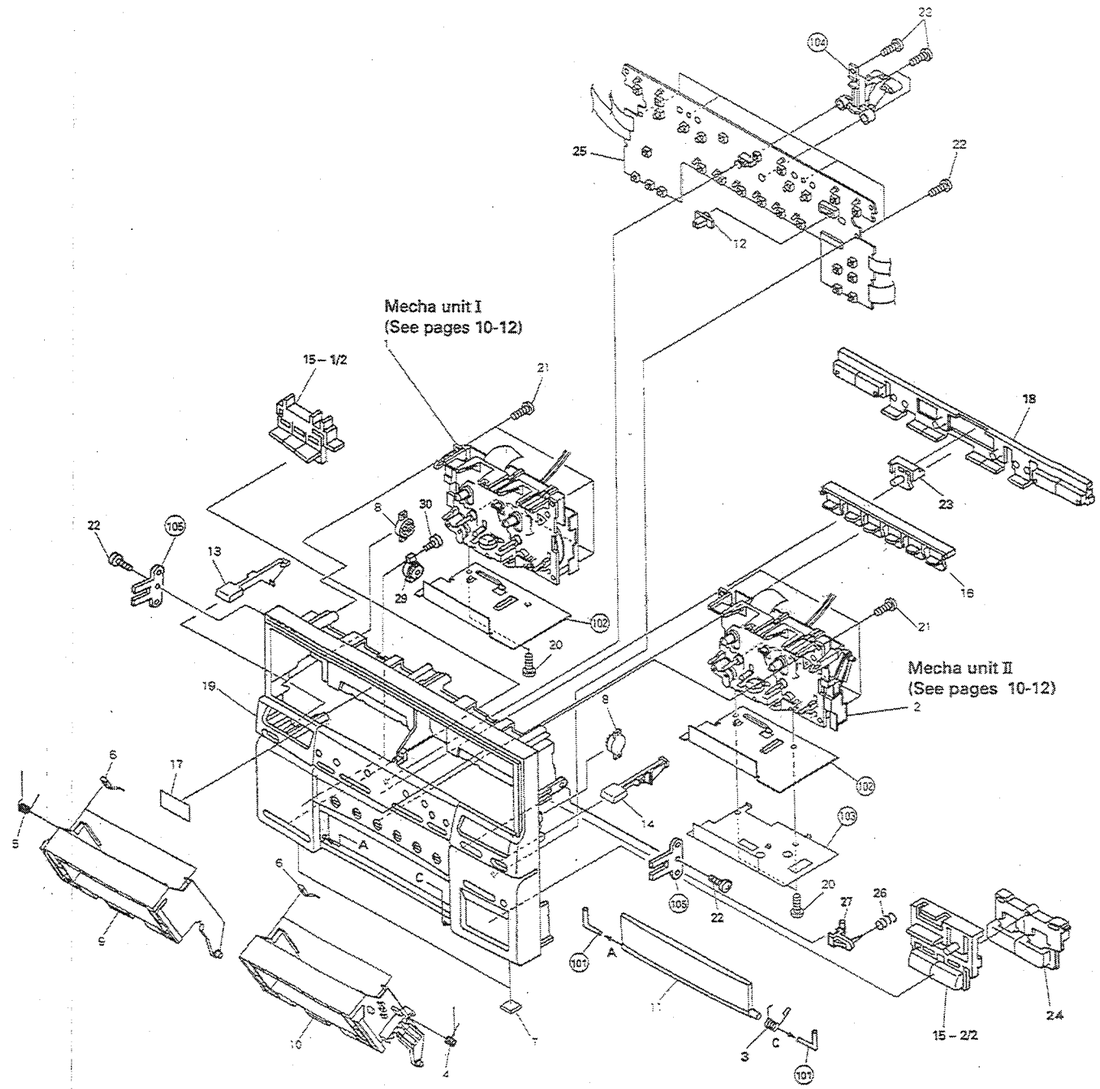


NOTE: Screws adjacent to ▼ mark on the product are used for disassembly.

3.3 FRONT PANEL SECTION



PDC-P530 Front panel section



PDC-P530M Front panel section

Parts List

Mark	No.	Description	Part No.
◉	1	Mecha unit I	RYM1189
◉	2	Mecha unit II	RYM1190
	3	Door spring (SUS) (PDC-P530M only)	RBH1333
	4	Eject spring R (SUS)	RBH1332
	5	Eject spring L (SUS)	RBH1331
	6	Spring (stainless)	RBK1004
	7	Cushion (rubber)	REB1004
	8	Damper ass'y	VXA1153
	9	Door pocket L (ABS)	RNK1878
	10	Door pocket R (ABS)	RNK1879
	11	Multi door (ABS) (PDC-P530M only)	RAH2156
	12	Slide knob(ABS) (AEBMXJ type)	RAC1691
	12	Slide knob(ABS) (ADL type)	RAC1641
	13	Eject knob L (ABS)	RAC1754
	14	Eject knob R (ABS)	RAC1755
	15	CD knob M (ABS) (PDC-P530M)	RAC1758
	15	CD knob S (ABS) (PDC-P530)	RAC1757
	16	Disc knob B (ABS) (PDC-P530M only)	RAC1765
	17	Indicating panel	REE-113
	18	Deck knob ass'y	RXA1529
	19	Panel (ABS) (PDC-P530M)	RNT1160
	19	Panel (ABS) (PDC-P530)	RNT1158
	20	Screw	BBZ26P050FMC
	21	Screw	BBZ30P080FMC
	22	Screw	BBZ30P080FZK
	23	REC knob (ABS)	RAC1760
	24	PLAY knob (ABS)	RAC1761
	25	CONT unit (PDC-P530M)	RWZ2870
	25	CONT unit (PDC-P530)	RWZ2866
	26	Lock spring (SUS) (PDC-P530M only)	RBH1334
	27	Lock lever (ABS) (PDC-P530M only)	RNK1883
	28	.....	
	29	Damper ass'y (PDC-P530M only)	PXA1484
	30	Screw (PDC-P530M only)	BBZ20P080FMC

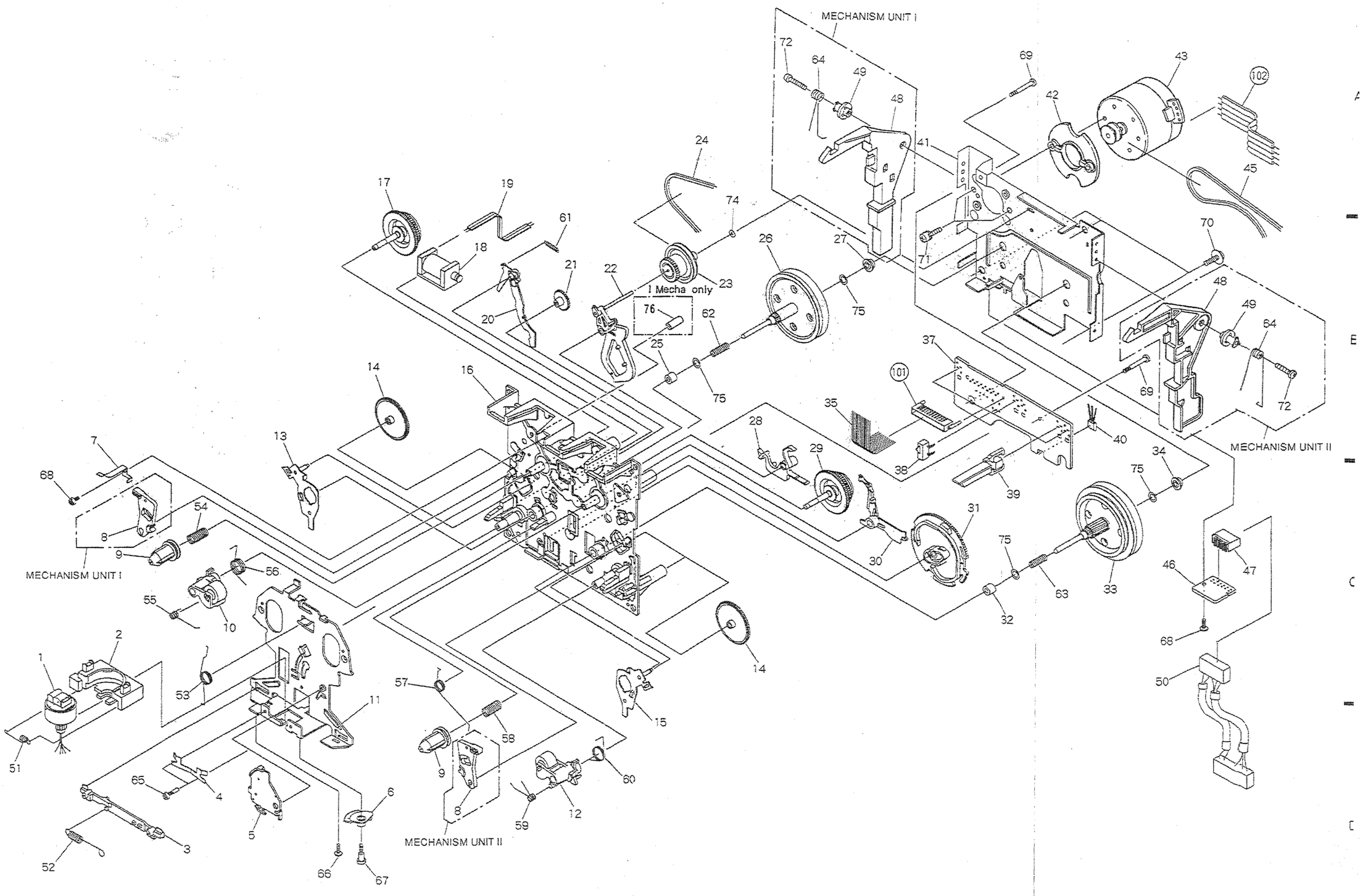
Mark	No.	Description	Part No.
NSP	101	Door shaft (FE) (PDC-P530M only)	RLA1185
NSP	102	Shield plate (FE)	RNE1586
	103	Shield plate B	RNE1507
NSP	104	Center bracket (ABS)	RNK1881
NSP	105	Bonnet stay	RNE1587

3.4 DECK SECTION

MECHANISM UNIT Ⅰ (RYM1189), Ⅱ (RYM1190)

Parts List

Mark	No.	Description	Part No.
	1	Head holder assembly (Ⅰ Mecha. only)	RXA1500
	1	Head holder assembly (Ⅱ Mecha. only)	RXA1477
	2	Head frame	RNK1715
	3	Head lever	RNK1716
	4	Azimuth spring	RBK1006
	5	Assist arm assembly	RXA1401
	6	Head arm gear	RNK1717
	7	Cassette spring	RBK1039
	8	Eject lock	RNK1718
	9	Reel cap	RNK1719
	10	Arm pinch assembly L	RXA1403
	11	Head base	RNE1437
	12	Arm pinch assembly R	RXA1404
	13	Play arm assembly L	RNK1866
	14	Play gear	RNK1867
	15	Play arm assembly R	RNK1868
	16	OS chassis	RXA1411
	17	Sub reel assembly L	RXA1407
	18	Solenoid	RXP1020
	19	Wire	RDC1006
	20	RVS arm	RNK1721
	21	FF gear	RNK1723
	22	FR arm assembly	RXA1412
	23	FR pulley assembly	RXA1413
	24	FR belt	REB1158
	25	Shaft holder	RNG1048
	26	Flywheel assembly L	RXA1423
	27	Shaft holder	RNG1005
	28	Brake arm	RNK1724
	29	Sub reel assembly R	RXA1408
	30	Trigger arm	RNK1722
	31	Cam gear	RNK1725
	32	Shaft holder	RNG1049
	33	Flywheel assembly R	RXA1424
	34	Shaft holder	RNG1004
	35	Wire(14P)(Ⅰ Mecha. only)	RDD1247
	35	Wire(14P)(Ⅱ Mecha. only)	RDD1217
	36	• • • • •	
	37	PC board	RNP1430
	38	Mode switch	RSN1022
	39	Leaf switch	RSN1019
	40	Hole IC	DN6851A
	41	FW bracket	RNE1438
	42	Spacer	RNK1822
	43	Motor assembly	RXM1062
	44	• • • • •	
	45	Main belt	REB1159
	46	PC board	RNP1348
	47	Housing(Ⅰ Mecha. only)	RKP1396
	47	Housing(Ⅱ Mecha. only)	RKP1397
	48	Eject lever L (Ⅰ Mecha. only)	RNK1831
	48	Eject lever R (Ⅱ Mecha. only)	RNK1811
	49	Collar	RNK1704
	50	Head wire(Ⅰ Mecha. only)	RKP1499
	50	Head wire(Ⅱ Mecha. only)	RKP1500
	51	Spring	RBH1282
	52	Spring	RBH1283
	53	Spring	RBH1284
	54	Spring	RBH1286
	55	Spring	RBH1288
	56	Spring	RBH1291
	57	Spring	RBH1285
	58	Spring	RBH1287
	59	Spring	RBH1289
	60	Spring	RBH1290
	61	Spring	RBH1292
	62	FWR spring	RBH1061
	63	FWF spring	RBH1325
	64	Spring(L)(Ⅰ Mecha. only)	RBH1319
	64	Spring(R)(Ⅱ Mecha. only)	RBH1320
	65	Azimuth screw	RBA1023
	66	U bind screw	RBA1027
	67	Screw	RBA1030
	68	Screw	PCZ20P040FMC
	69	Screw	RBA1093
	70	Screw	RBA1094
	71	Screw	RBA1100
	72	Screw	RBA1095
	73	• • • • •	
	74	Washer	RBF1046
	75	Washer	WA26D047D013
	76	Spacer	RNK1905
NSP	101	Wire holder	RNK1683
NSP	102	Jumper	RDD1012


MECHANISM UNIT I
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MECHANISM UNIT I
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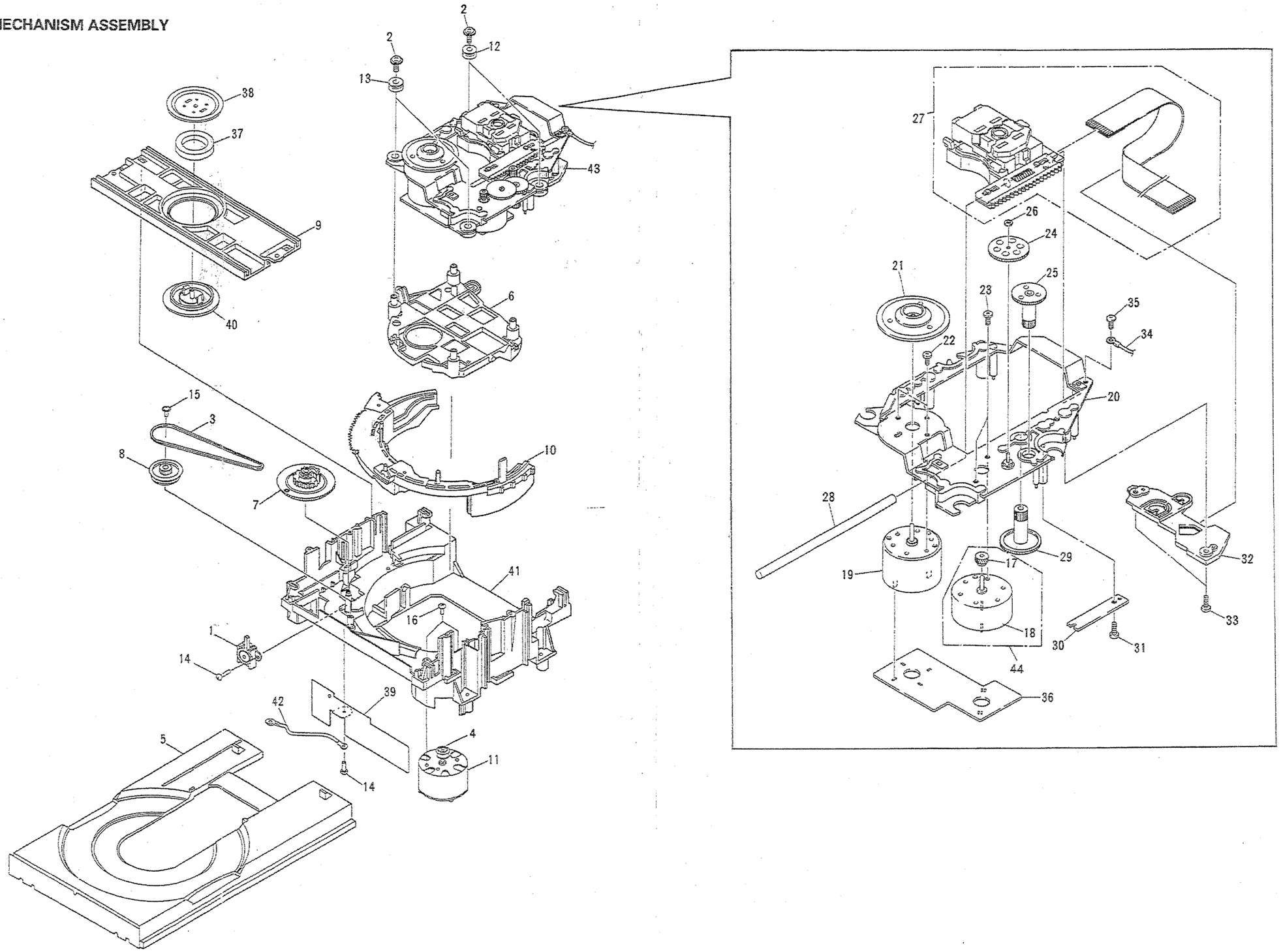
3.5 SINGLE MECHANISM ASSEMBLY



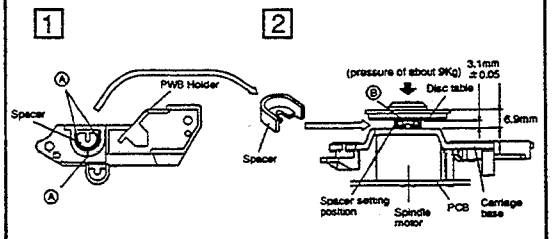
Parts List

Mark	No.	Description	Part No.
	1	Lever switch (CLAMP)	DSK1003
	2	Float screw	PBA1048
	3	Rubber belt	PEB1193
	4	Motor pulley	PNW1634
	5	Tray	PNW2265
	6	Float base	PNW2032
	7	Drive gear	PNW2266
	8	Gear pulley	PNW2034
	9	Clamper base	PNW2035
	10	Clamp cam	PNW2036
	11	DC motor/0.75W (LOADING)	PXM1010
	12	Float rubber	PEB1014
	13	Float rubber	PEB1132
	14	Screw	BPZ26P080FMC
	15	Screw	Z39 – 018
	16	Screw	PMZ26P040FMC
	17	Pinion gear	PNW2055
	18	DC motor (CARRIAGE)	PXM1027
	19	DC motor (SPINDLE)	PEA1235
NSP	20	Carridge base	PNW2058
	21	Disc table	PNW1068
	22	Screw	JFZ20P030FNI
	23	Screw	JFZ17P025FZK
	24	Gear 3	PNW2054
	25	Gear 2	PNW2053
	26	Washer	WT12D032D025
	27	Pickup assembly	PEA1179
	28	Guide bar	PLA1094
	29	Gear 1	PNW2052
NSP	30	Gear stopper	PNB1303
	31	Screw	BPZ20P060FMC
	32	PWB holder	PNW2057
	33	Screw	BPZ26P100FMC
NSP	34	Earth lead unit	PDF1104
	35	Screw	BBZ26P060FMC
	36	Mechanism board assembly	PWX1192
NSP	37	Clamp magnet	PMF1014
NSP	38	Yoke	PNB1216
NSP	39	Shield plate	PNB1317
NSP	40	Clamper S	PNW1609
NSP	41	Loading base	PNW2030
NSP	42	Earth lead unit	XDF – 502
NSP	43	Servo mechanism assembly	PXA1478
	44	DC motor assembly (CARRIAGE)	PEA1246

• How to install the disc table

[1] Use nipper or other tool to cut the three sections marked Ⓐ figure [1]. Then remove the spacer.

[2] While supporting the spindle motor shaft with the stopper, put spacer on top of the motor base (angled so it doesn't touch section Ⓑ),and stick the disc table on top (takes about 9Kg pressure). Take off the spacer.



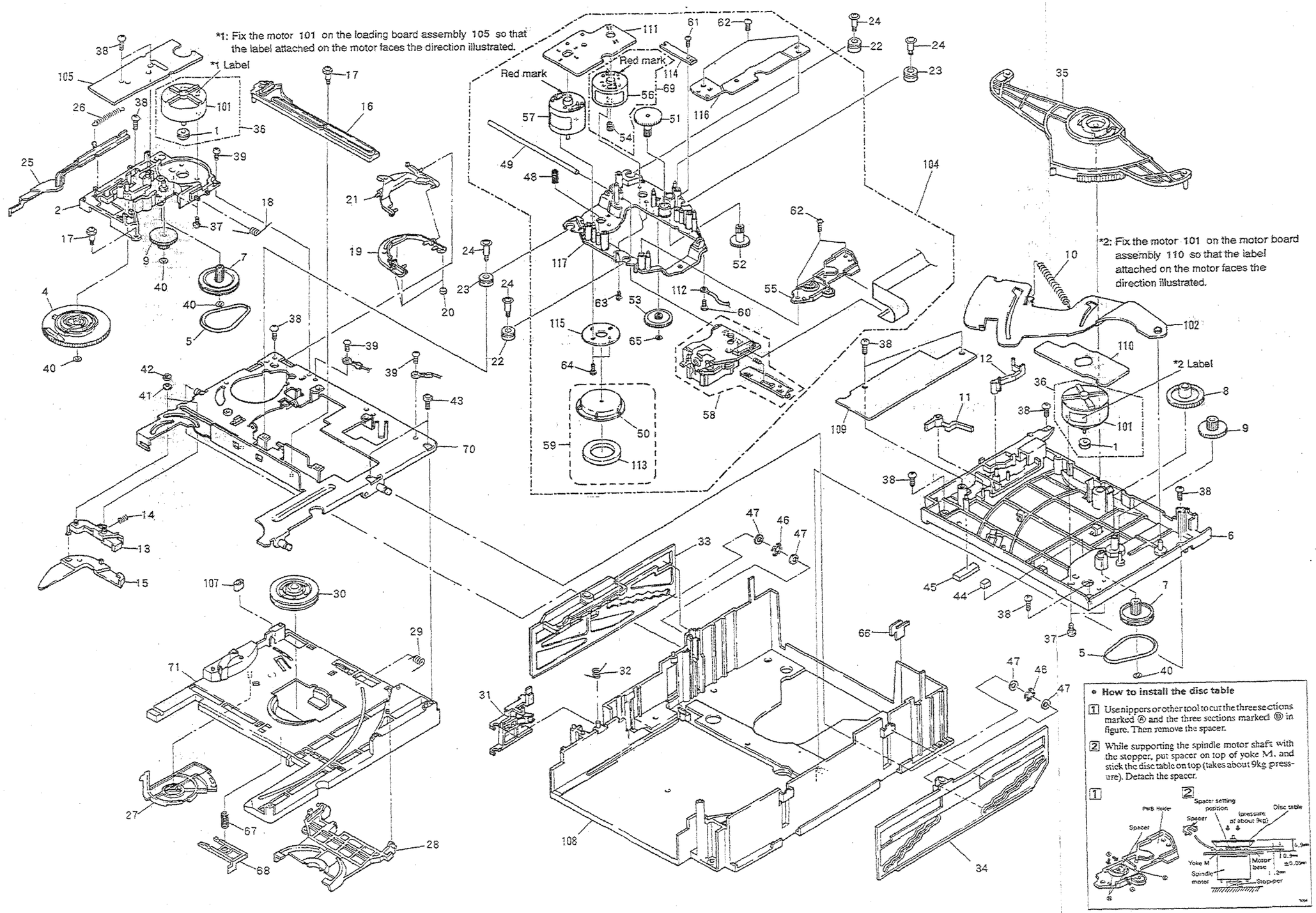
3.6 MULTI MECHANISM ASSEMBLY

Parts List

Mark	No.	Description	Part No.
	1	Motor pulley	PNW1634
	2	Gear holder	PNW1929
	3	• • • • •	
	4	Cam gear	PNW1923
	5	Belt	PEB1138
	6	Top guide	PNW2061
	7	Gear pulley	PNW1918
	8	Gear S	PNW1919
	9	Gear L	PNW1920
	10	Eject spring	PBH1107
	11	Switch lever	PNW1927
	12	Seven bar	PNW1931
	13	Sub rotary lever	PNW1933
	14	Sub rotary lever spring	PBH1111
	15	Rotary lever	PNW1932
	16	Drive plate	PNW1930
	17	Motor screw	PBA-112
	18	Holder lever spring	PBH1110
	19	Disc holder	PNW1924
	20	Cushion A	PED1001
	21	Holder lever	PNW1925
	22	Float rubber	PEB1014
	23	Float rubber	PEB1132
	24	Float screw	PBA1073
	25	Release lever	PNW1934
	26	Release spring	PBH1106
	27	Clamper cam	PNW1922
	28	Clamper holder	PNW1921
	29	Clamper spring	PBH1109
	30	Clamper	PNW1857
	31	Lock lever	PNW1917
	32	Lock spring	PBH1108
	33	Stair L	PNW1915
	34	Stair R	PNW1916
	35	Synchronize lever	PNW1926
	36	Motor assembly (LOADING, DISC SELECT)	PEA1130
	37	Screw	PMZ26P040FMC
	38	Screw	PPZ30P080FMC
	39	Screw	BBZ30P060FMC
	40	Washer	WT26D047D025
	41	Washer	WA31D054D025
	42	E ring	Z39-010
	43	Screw	IPZ30P080FMC
	44	Rubber spacer	PEB1238
	45	Rubber spacer	PEB1179
	46	Silent ring	PBK1093
	47	Washer	WA62D130D025
	48	Earth spring	PBH1132
	49	Guide bar	PLA1094
	50	Disc table	PNW1067
	51	Gear 1	PNW2052
	52	Gear 2	PNW2053
	53	Gear 3	PNW2054
	54	Pinion gear	PNW2055
	55	PWB holder	PNW2057
	56	Carriage DC motor / 0.3W	PXM1027
	57	D.C. motor assembly (spindle, with oil)	PEA1235
	58	Pickup assembly	PEA1285
	59	Disc table assembly	PEA1035
	60	Screw	BBZ26P060FMC
	61	Screw	BPZ20P060FMC
	62	Screw	BPZ26P100FMC
	63	Screw	JFZ17P025FZK
	64	Screw	JFZ20P040FMC
	65	Washer	WT12D032D025
	66	Stopper M	REC1084
	67	Stopper spring	PBH1131
	68	Stopper	PNW2069
	69	D.C. motor assembly (CARRIAGE)	PEA1246
	70	Upper chassis	PNB1267
	71	Sub chassis	PNW2073
NSP	101	Motor	VXM1033
NSP	102	Eject lever	PNB1306
	103	• • • • •	
NSP	104	Servo mechanism assembly M	PXA1417
NSP	105	Loading board assembly	PWZ2038
	106	• • • • •	
NSP	107	Rubber tube	PEB1171
NSP	108	Main chassis	PNW2074
NSP	109	Select board assembly	PWZ2533
NSP	110	Motor board assembly	PWZ2040
NSP	111	Mechanism board assembly	PWX1192
NSP	112	Earth lead unit	PDF1074
NSP	113	Clamp magnet	PMF1014
NSP	114	Gear stopper	PNB1303
NSP	115	Yoke M	PNB1312
NSP	116	AV angle	PNB1405
NSP	117	Carriage base	PNW2058

*1: Fix the motor 101 on the loading board assembly 105 so that the label attached on the motor faces the direction illustrated.

*2: Fix the motor 101 on the motor board assembly 110 so that the label attached on the motor faces the direction illustrated.



• How to install the disc table

1 Use nippers or other tool to cut the three sections marked Ⓐ and the three sections marked Ⓑ in figure. Then remove the spacer.

2 While supporting the spindle motor shaft with the stopper, put spacer on top of yoke M, and stick the disc table on top (takes about 9kg pressure). Detach the spacer.

4. PCB PARTS LIST

NOTES:

- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω → 56 × 10¹ → 561 ..... RD1/8PM 5 6 1 J
47kΩ → 47 × 10³ → 473 ..... RD1/4PS 4 7 3 J
0.5Ω → 0R5 ..... RN2H 0 R 5 K
1Ω → 010 ..... RS1P 0 1 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ → 562 ×10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.
		LIST OF ASSEMBLIES	
		PDC-P530M	
		MAIN UNIT	RWZ2862
		SUB UNIT	RWZ2863
		CONT UNIT	RWZ2870
NSP		MECHANISM BOARD ASS'Y	PWX1192
NSP		LOADING BOARD ASS'Y	PWZ2038
NSP		SELECT BOARD ASS'Y	PWZ2533
NSP		MOTOR BOARD ASS'Y	PWZ2040
		PDC-P530	
		MAIN UNIT	RWZ2854
		SUB UNIT	RWZ2855
		CONT UNIT	RWZ2866
NSP		MECHANISM BOARD ASS'Y	PWX1192
		◉ PDC-P530M	
		MAIN UNIT	
		SEMICONDUCTORS	
⚠	IC101		LM2940CT-5.0
⚠	IC102		NJM79M05FA
⚠	IC104		NJM7912FA
	IC201		HA12142NT
	IC301		CXA1372Q
	IC302		CXD2500BQ
	IC305		PD4464A
	IC306,IC307		LA6520
	IC501,IC522,IC702		NJM4558DX
	IC523		SN74LS05N
	IC701		SM5871AS
	Q102		2SA933S
	Q103,Q903-Q906		XDC124ES
	Q481,Q482,Q523,Q524		2SD2144S
	Q491,Q492		2SC1740S
	Q493,Q494		2SC1740SLN

Mark	No.	Description	Part No.
	Q901		2SK246
	Q902		XDA124ES
⚠	D101		S2VB20
⚠	D102		1SS254
	D104-D106,D491,D492,D901-D904		1SS254
	COILS AND FILTERS		
	L523,L524 (3.9mH)		RTF1020
	L701,L702		LAU010K
	F201,F202 (MPX Filter)		RTF1202
	CAPACITORS		
⚠	C101,C102		CEAS222M16
	C103,C104,C119,C201,C202,C315, C324,C327,C331,C901		CEAS101M10
	C110		CEAS470M25
	C111,C203,C204,C493,C494,C496		CEAS100M50
⚠	C113,C114		CKDYF103Z50
	C116,C320,C321,C525,C526,C716, C717		CEAS330M16
	C117		CEAS330M35
	C205-C210		CFTXA222J50
	C211-C214,C312,C316,C318, C319,C330,C336,C703-C705,C718		CFTYA104J50
	C215-C218,C491,C492,C523,C524		CEAS010M50
	C219,C220		CFTXA392J50
	C301,C529,C530		CFTXA182J50
	C302,C307,C311,C325,C329		CFTYA103J50
	C303,C308		CFTYA333J50
	C304,C305		CFTXA472J50
	C306		CFTXA332J50
	C309,C314,C332-C334,C337,C338, C720		CKCYF103Z50
	C310		CEAS221M6R3
	C313,C317		CEAS4R7M50

Mark	No.	Description	Part No.
	C322,C541,C542		CFTYA473J50
	C323		CKCYB152K50
	C326,C549		CEASR47M50
	C328		CGCYX473K25
	C335,C722		CKCYB102K50
	C495		CEASR33M50
	C527,C528		CFTYA683J50
	C531,C532		CEAS2R2M50
	C537,C538		CFTYA273J50
	C545,C546		CEAS470M16
	C701		CCCCH120J50
	C702		CCCCH220J50
	C706,C707		CCCCH221J50
	C708-C711		CCCCH820J50
	C712,C713		CEANP4R7M35
	C714,C715		CFTXA152J50
	C721		CCCSL101J50
	C902		CKCYF223Z50
	RESISTORS		
	R527,R528 (9.1K ,1/6W)		RCN1060
	R999 (47K,1/10W)		RA8T473J
	VR301,VR302,VR521,VR522 (22K,0.1W)		RCP1046
	Other Resistors		RD1/6PM□□□J
	OTHERS		
	CN21 Connector (12P)		12FM-1.0BT
	CN27 Connector		52257-1110
	CN28 Connector		52257-1210
	X701 Xtal Resonator (16.9344MHz)		PSS1006
	X901 Ceramic Resonator (4.19MHz)		VSS1028
	SUB UNIT		
	SEMICONDUCTORS		
	IC412		MC14066BCP
	IC431		NJM4558DX
	IC801		PD3204A
	Q413,Q414		2SK373
	Q433-Q436,Q439,Q440		2SC1740S
	Q580-Q582,Q810,Q817		2SA1283
	Q583,Q802,Q805,Q808,Q811,Q815, Q818,Q822		XDA124ES
	Q584,Q812,Q819		2SC3243
	Q801,Q809,Q816,Q823-Q825		XDC124ES
	Q803		DTC143ES
	Q807		2SA933S
	Q829		XDC144ES
	D411-D420,D430,D431,D801,D803, D806-D808		1SS254
	D802,D804		1SS252
	COILS AND TRANSFORMER		
	L451,L452 (5.6mH)		RTF1099
	L521,L522 (10mH)		RTF1102
	T581 OSC Transformer		ATX-043

Mark	No.	Description	Part No.
	CAPACITORS		
	C403		CQPA162J100
	C411,C412		CKCYB331K50
	C413,C414		CKCYB471K50
	C415,C416		CKCYB821K50
	C417,C418		CCCSL101K500
	C419,C420		CEANL100M16
	C421,C422		CCPUSL100J50
	C431,C432		CFTXA682J50
	C433,C434		CEAS330M16
	C435,C436,C591		CEAS470M16
	C439,C440		CEAS010M50
	C441,C442		CKCYB391K50
	C497		CKCYF102Z50
	C533,C534,C586		CKCYB681K50
	C547,C548		CKPUYB221K50
	C581,C805		CEAS4R7M50
	C582,C584		CFTYA103J50
	C583		CFTYA153J50
	C585		CFTYA123J50
	C801		CEAS100M50
	C802		CKCYF473Z50
	C803		CKCYB152K50
	C806		CKCYF103Z50
	RESISTORS		
	R408 (4.7 ,1/2W)		RCN1022
	R589 (220 ,1/2W)		RCN1021
	R590 (120 ,1/2W)		RCN1020
	R825,R832		RN1/6PQ1302F
	R826,R826		RN1/6PQ6801F
	R839-R841 (22K ,1W)		RCX1041
	VR411,VR412 (220K)		RCP1116
	VR451-VR454 (22K ,0.1W)		RCP1084
	VR801,VR802 (10K ,0.1W)		RCP1115
	Other Resistors		RD1/6PM□□□J
	OTHERS		
	CN13 Connector		53178-1110
	CN14 Connector		53178-1210
	X801 Ceramic Resonator (4.19MHz)		VSS1028
	CONT UNIT		
	SEMICONDUCTORS		
	D1002,D1003,D1005,D1006		SEL6410G
	D1004		SEL6C10R
	SWITCHS		
	S1001		RSH1030
	S1002-S1014,S1101-S1103,S1105, S1106,S1108-S1115,S1121,S1122		RSG1033
	RESISTORS		
	All Resistors		RD1/6PM□□□J

Mark	No.	Description	Part No.
MECHANISM BOARD ASS'Y			
SWITCH			
	S610		DSG1016
LOADING BOARD ASS'Y			
SWITCHS			
	S601		DSG1016
	S602		DSG1016
SELECT BOARD ASS'Y			
SWITCHS			
	S603		PSG1010
	S604-S606		DSG1016
MOTOR BOARD ASS'Y			
MOTOR BOARD ass'y has no service part.			

• PDC-P530

For PCB assemblies, PDC-P530 and PDC-P530M have the same construction except for the following:

Mark	No.	Description	Part No.
MAIN UNIT			
SEMICONDUCTORS			
⚠	IC101		LM2940CT-5.0
⚠	IC102		NJM79M05FA
⚠	IC104		NJM7912FA
	IC201		HA12142NT
	IC301		CXA1372Q
	IC302		CXD2500BQ
	IC305		PD4462A
	IC306		LA6520
	IC307		LA6517
	IC501,IC522,IC702		NJM4558DX
	IC523		SN74LS05N
	IC701		SM5871AS
	Q102		2SA933S
	Q103,Q903-Q906		XDC124ES
	Q481,Q482,Q523,Q524		2SD2144S
	Q491,Q492		2SC1740S
	Q493,Q494		2SC1740SLN
	Q901		2SK246
	Q902		XDA124ES
⚠	D101		S2VB20
⚠	D102		1SS254
	D104-D106,D491,D492,D901-D904		1SS254
COILS AND FILTERS			
	L523,L524 (3.9mH)		RTF1020
	L701,L702		LAU010K
	F201,F202 (MPX Filter)		RTF1202
CAPACITORS			
⚠	C101,C102		CEAS222M16
	C103,C104,C119,C201,C202,C315, C324,C327,C331,C901		CEAS101M10
	C110		CEAS470M25
	C111,C203,C204,C493,C494,C496		CEAS100M50
⚠	C113,C114		CKDYF103Z50
	C116,C320,C321,C525,C526,C716, C717		CEAS330M16
	C117		CEAS330M35
	C205-C210		CFTXA222J50
	C211-C214,C312,C316,C318,C319, C330,C336,C703-C705,C718		CFTYA104J50
	C215-C218,C491,C492,C523,C524		CEAS010M50
	C219,C220		CFTXA392J50
	C301,C529,C530		CFTXA182J50
	C302,C307,C311,C325,C329		CFTYA103J50
	C303,C308		CFTYA333J50
	C304,C305		CFTXA472J50
	C306		CFTXA332J50
	C309,C314,C332-C334,C337,C338, C720		CKCYF103Z50
	C310		CEAS221M6R3
	C313,C317		CEAS4R7M50
	C322,C541,C542		CFTYA473J50
	C323		CKCYB152K50
	C326,C549		CEASR47M50
	C328		CGCYX473K25
	C335,C722		CKCYB102K50
	C495		CEASR33M50
	C527,C528		CFTYA683J50
	C531,C532		CEAS2R2M50
	C537,C538		CFTYA273J50
	C545,C546		CEAS470M16
	C701		CCCCH120J50
	C702		CCCCH220J50
	C706,C707		CCCCH221J50
	C708-C711		CCCCH820J50
	C712,C713		CEANP4R7M35
	C714,C715		CFTXA152J50
	C721		CCCSL101J50
	C902		CKCYF223Z50
RESISTORS			
	R527,R528 (9.1K ,1/6W)		RCN1060
	R999 (47K,1/10W)		RA8T473J
	VR301,VR302,VR521,VR522 (22K,0.1W)		RCP1046
	Other Resistors		RD1/6PM□□□J

Mark	No.	Description	Part No.

OTHERS

	CN21	Connector (12P)	12FM-1.0ST
	CN27	Connector	52257-1110
	CN28	Connector	52257-1210
	X701	Xtal Resonator (16.9344MHz)	PSS1006
	X901	Ceramic Resonator (4.19MHz)	VSS1028

SUB UNIT

Although SUB UNIT (RWZ2855) and SUB UNIT (RWZ2863) for PDC-P530M are different in part number,they consist of the same components.

CONT UNIT

SEMICONDUCTORS

	D1002,D1003,D1005,D1006	SEL6410G
	D1004	SEL6C10R

SWITCHS

	S1001	RSH1030
	S1002-S1014,S1101,S1102, S1104-S1109,S1120	RSG1033

RESISTORS

	All Resistors	RD1/6PM□□□J

5. SCHEMATIC AND PCB CONNECTION DIAGRAM

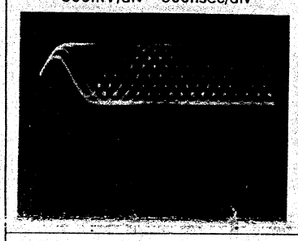
Waveforms

Note: The encircled numbers denote measuring points in the schematic diagram.

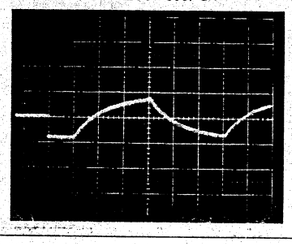
*1 50T-JUMP: After switching to the pause mode, press the manual search key.

*2 FOCUS-IN: Press the key without loading a disc.

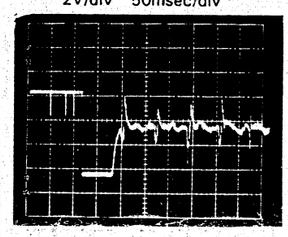
② TP301-Pin1 : PLAY MODE
(RF)
500mV/div 500nsec/div



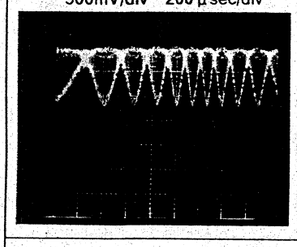
⑤ IC306-Pin4 : FOCUS-IN (＊2) MODE
(FODR)
1V/div 200msec/div



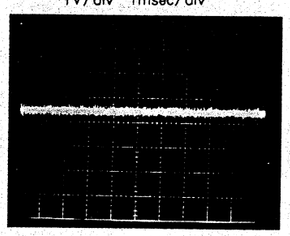
⑦ IC307-Pin3 : TRACK SEARCH MODE
(SPDR)
2V/div 50msec/div



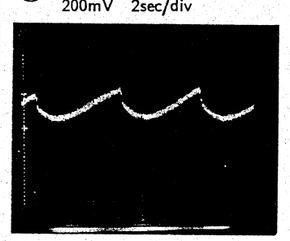
② TP301-Pin1 : TRACK SEARCH MODE
(RF)
500mV/div 200 μsec/div



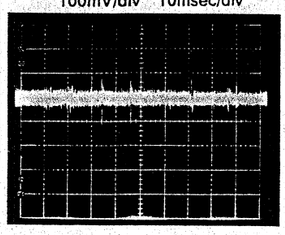
⑤ IC306-Pin4 : PLAY MODE
(FODR)
1V/div 1msec/div



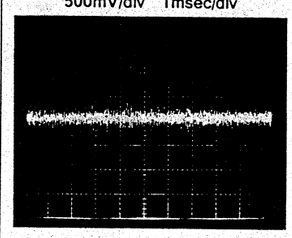
⑧ IC306-Pin9 : PLAY MODE
(CADR)
200mV 2sec/div



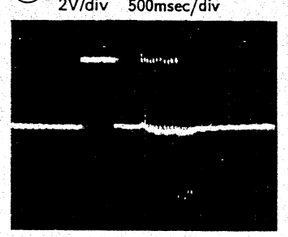
③ TP301-Pin6 : PLAY MODE
(FOER)
100mV/div 10msec/div



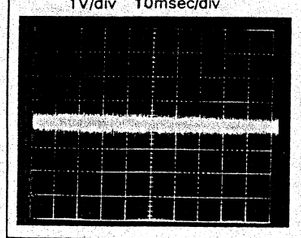
⑥ IC306-Pin3 : PLAY MODE
(TRDR)
500mV/div 1msec/div



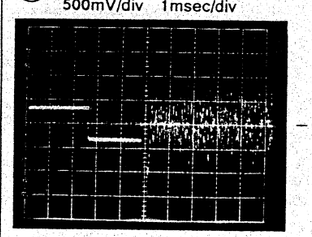
⑧ IC306-Pin9 : TRACK SEARCH MODE
(CADR)
2V/div 500msec/div



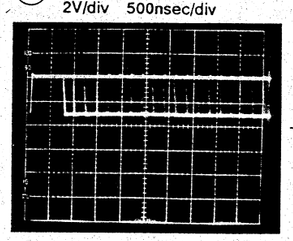
④ TP301-Pin2 : PLAY MODE
(TRER)
1V/div 10msec/div



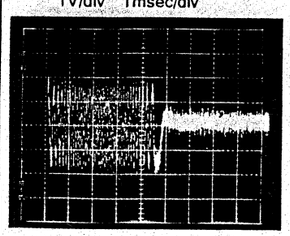
⑥ IC306-Pin3 : 50T-JUMP (＊1) MODE
(TRDR)
500mV/div 1msec/div



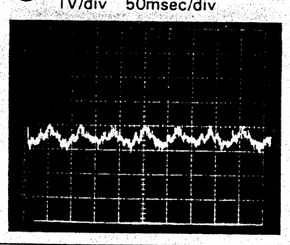
⑨ IC301-Pin32 : PLAY MODE
(EFM)
2V/div 500nsec/div



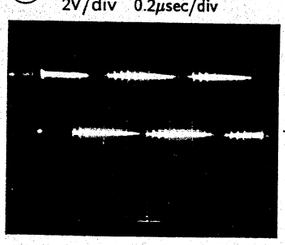
④ TP301-Pin2 : 50T-JUMP (＊1) MODE
(TRER)
1V/div 1msec/div



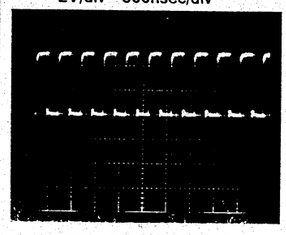
⑦ IC307-Pin3 : PLAY MODE
(SPDR)
1V/div 50msec/div



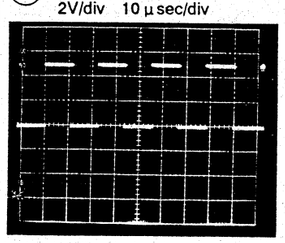
⑩ IC701 - pin20 : PLAY MODE
(D/A DATA OUT)
2V/div 0.2μsec/div



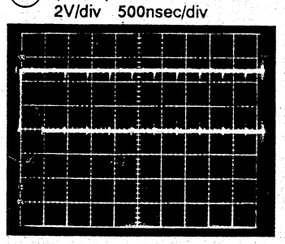
⑯ IC302-Pin35 : PLAY MODE (1kHz)
(BCLK)
2V/div 500nsec/div



⑱ IC302-Pin32 : PLAY MODE (1kHz)
(LRCK)
2V/div 10 μsec/div

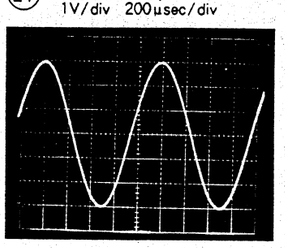


⑲ IC302-Pin34 : PLAY MODE (1kHz)
(DATA)
2V/div 500nsec/div



⑳

㉑ CN01-Pin13 : PLAY MODE (1kHz)
(Lch OUTPUT)
1V/div 200μsec/div



㉒

㉓ Upper : T
Lower : I

㉔ Upper : T
Lower : IC
5V

㉕

Note: (Type 4)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or μF unless otherwise noted.
   Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electrolytic capacitors.
5. **COILS:**
   Unit: m:mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   ▭ : DC voltage (V) in PLAY mode unless otherwise noted.
   ⇦ mA or ← mA: DC current in PLAY mode unless otherwise noted.
   Value in ( ) is DC current in STOP mode.
7. **OTHERS:**
   - ➡ : Signal route.
   - ⊘ : Adjusting point.
   - ▼ (Red) : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. **SWITCHES** (Underline indicates switch position):

PDC-P530M
CONT UNIT
S1001:DOLBY NR (B-OFF-C)
S1002:DECK I FWD (►)
S1003:DECK I REV (◄)
S1004:DECK I STOP (■)
S1005:DECK I FF (►►)
S1006:DECK I REW (◄◄)
S1007:ASES
S1008:DECK II FWD (►)
S1009:DECK II REV (◄)
S1010:DECK II STOP (■)
S1011:DECK II FF (►►)
S1012:DECK II REW (◄◄)
S1013:DECK II REC/PAUSE (●II)
S1014:DECK COPY
S1101:CD PLAY/PAUSE (►/II)
S1102:CD TRACK SEARCH FWD (►►I·►►)
S1103:CD PGM
S1105:CD STOP (■)
S1106:CD TRACK SEARCH REV (◄◄·I◄◄)
S1108:CD RANDOM
S1109:CD OPEN/EJECT
S1110:CD DISC NUMBER 1
S1111:CD DISC NUMBER 2
S1112:CD DISC NUMBER 3
S1113:CD DISC NUMBER 4
S1114:CD DISC NUMBER 5
S1115:CD DISC NUMBER 6
S1121:CD REPEAT
S1122:CD COMPU PGM

MECHANISM BOARD ASS'Y
S610 :INSIDE

LOADING PCB ASS'Y
S601 :LPS1
S602 :LPS2

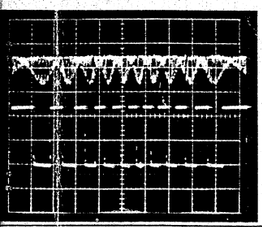
SELECT PCB ASS'Y
S603 :MZS1
S604 :MZS2
S605 :DCHM
S606 :DCNT

PDC-P530
CONT UNIT
S1001:DOLBY NR (B-OFF-C)
S1002:DECK I FWD (►)
S1003:DECK I REV (◄)
S1004:DECK I STOP (■)
S1005:DECK I FF (►►)
S1006:DECK I REW (◄◄)
S1007:ASES
S1008:DECK II FWD (►)
S1009:DECK II REV (◄)
S1010:DECK II STOP (■)
S1011:DECK II FF (►►)
S1012:DECK II REW (◄◄)
S1013:DECK II REC/PAUSE (●II)
S1014:DECK COPY
S1101:CD PLAY/PAUSE (►/II)
S1102:CD TRACK SEARCH FWD (►►I·►►)
S1104:CD REPEAT
S1105:CD STOP (■)
S1106:CD TRACK SEARCH REV (◄◄·I◄◄)
S1107:CD COMPU PGM
S1108:CD RANDOM
S1109:CD OPEN/CLOSE
S1120:CD PGM

(22) (26)

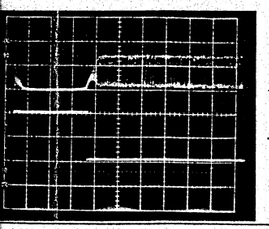
(22) (27)

(23) TRACK SEARCH MODE
Upper : TP301-Pin1 (RF) 1V/div
Lower : IC301-Pin29 (MIRR)
2V/div 200 μsec/div

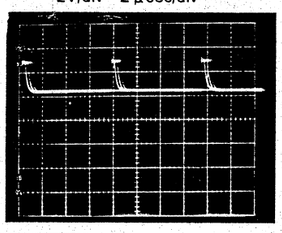


(28)

(24) PLAY MODE
Upper : TP301-Pin1 (RF) 1V/div
Lower : IC301-Pin30 (DFCT)
5V/div 200 μsec/div

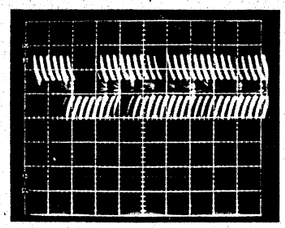


(33) IC302-Pin4 : PLAY MODE
(MDP)
2V/div 2 μsec/div



(25)

(53) IC302-Pin20 : PLAY MODE
(PCO)
2V/div 10 μsec/div



SUB UNIT

IC801
(PD3204A)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	N. C.	33	5
2	4.3	34	5
3	0	35	5
4	0	36	5
5	N. C.	37	2.4
6	4.9	38	0
7	N. C.	39	0
8	0	40	5
9	1.9	41	0
10	2.5	42	0
11	0	43	0
12	4.3	44	0
13	2.5	45	5
14	0	46	5
15	N. C.	47	5
16	0	48	5
17	0	49	0
18	5	50	5
19	5	51	2.2 (CLOCK)
20	5	52	2.1 (CLOCK)
21	4.8	53	0
22	5	54	0
23	0	55	N. C.
24	5	56	0
25	5	57	0
26	5	58	5
27	5	59	N. C.
28	0.1	60	N. C.
29	5	61	N. C.
30	5	62	4.3
31	5	63	0
32	5	64	N. C.

Point	Signal name	Mode	Voltage (V)
Ⓐ	X2 or CrO2	STOP	0
		PB Nor	0
		PBCrO2	3.7
Ⓑ	$\overline{2CR}$	2-Nor	5
		2-CrO2	0
Ⓒ	$\overline{2PB}$	STOP	5
		1PB	5
		2PB	0
		COPY	5
Ⓓ	LMTE	STOP	4.2
		PB	0
		REC (Normal Mode)	4.2
		REC (Test Mode)	0
Ⓔ	DOLBY	OFF	-3.6
		B	0
		C	4.5
Ⓕ	RMTE	STOP	2.4
		PB	2.4
		REC	0
Ⓙ	ENC	STOP	5
		PB	-4.8
		REC	5

MAIN UNIT

IC301
(CXA1372Q)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	25	4.9
2	0	26	0.05
3	0	27	0.05
4	0	28	0
5	0	29	0
6	0	30	N. C.
7	0.3	31	2.5
8	0	32	2.5
9	0	33	0.1
10	5	34	1.3
11	0	35	-1
12	0	36	5
13	0	37	0
14	0	38	-3.5
15	0	39	0
16	-4	40	0
17	1.3	41	-4.9
18	0	42	0
19	-4.9	43	0
20	5	44	0
21	0	45	0
22	5	46	0
23	5	47	0
24	0	48	0

IC302
(CXD2500BQ)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.1	41	N. C.
2	N. C.	42	0
3	0	43	N. C.
4	0	44	N. C.
5	N. C.	45	N. C.
6	0	46	4.4
7	N. C.	47	3.3
8	N. C.	48	3.3
9	0	49	0
10	0	50	N. C.
11	N. C.	51	N. C.
12	0	52	0
13	N. C.	53	2.5
14	N. C.	54	N. C.
15	N. C.	55	0
16	N. C.	56	N. C.
17	0	57	N. C.
18	3.2	58	N. C.
19	2.4	59	0
20	2.4	60	N. C.
21	0	61	N. C.
22	3.2	62	N. C.
23	5	63	0
24	2.5	64	N. C.
25	N. C.	65	0
26	0	66	0
27	2.5	67	5
28	0	68	5
29	N. C.	69	0
30	0	70	4.9
31	N. C.	71	0
32	2.5	72	5
33	5	73	5
34	0	74	5
35	2.2	75	0.05
36	N. C.	76	0.05
37	N. C.	77	0
38	N. C.	78	5
39	N. C.	79	5
40	N. C.	80	0

PDC-P530
IC305
(PD4462A)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.1	33	0
2	0	34	0
3	0	35	0
4	5	36	0
5	5	37	0
6	5	38	5
7	5	39	0
8	5	40	5
9	0	41	5
10	0	42	5
11	5	43	5
12	5	44	5
13	5	45	4.9
14	5	46	2.6 (CLOCK)
15	0	47	2.5 (CLOCK)
16	0	48	4.9
17	5	49	0
18	0	50	5
19	0	51	0
20	2.8	52	N. C.
21	N. C.	53	N. C.
22	N. C.	54	N. C.
23	N. C.	55	0
24	N. C.	56	N. C.
25	N. C.	57	N. C.
26	N. C.	58	0
27	N. C.	59	0
28	N. C.	60	0
29	N. C.	61	0
30	N. C.	62	0
31	5	63	0
32	5	64	0

PDC-530M
IC305
(PD4464A)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0.1	33	0
2	0	34	0
3	0	35	0
4	5	36	0
5	5	37	0
6	5	38	5
7	5	39	0
8	5	40	0
9	0	41	0
10	0	42	5
11	5	43	5
12	5	44	0
13	5	45	4.9
14	5	46	2.9 (CLOCK)
15	0	47	2.6 (CLOCK)
16	0	48	4.9
17	5	49	0
18	0	50	5
19	0	51	0
20	2.8	52	N. C.
21	N. C.	53	N. C.
22	N. C.	54	N. C.
23	N. C.	55	0
24	N. C.	56	N. C.
25	N. C.	57	N. C.
26	N. C.	58	Off 0, On 5
27	N. C.	59	Off 0, On 5
28	N. C.	60	Off 0, On 5
29	N. C.	61	Off 0, On 5
30	N. C.	62	Off 0, On 5
31	5	63	Off 0, On 5
32	5	64	0

IC306
(LA6520)

Pin No.	Voltage (V)
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	11.2
VEE	-11.9

PDC-P530
IC307
(LA6517)

Pin No.	Voltage (V)
1	0
2	11.2
3	0
4	-11.9
5	0
6	0
7	0
8	0

PDC-P530M
IC307
(LA6520)

Pin No.	Voltage (V)
1	0
2	0
3	0
4	0
5	0
6	0
7	0
8	0
9	0
10	0
11	0
12	11.2
VEE	-11.9

IC201
(HA12142NT)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	0	16	0
2	4.8	17	-2
3	0	18	OFF -0.5
4	0		B -1.8
5	OFF -3.5		C -2
	B 0	19	0
	C 4.6	20	0
6	0	21	0
7	0	22	0
8	0	23	0
9	0	24	0
10	0	25	0
11	0	26	-0.3
12	0	27	-4.4
13	OFF -0.4	28	0
	B -1.8	29	-4.6
	C -2	30	0
14	-2		
15	0		

IC701
(SM5871AS)

Pin No.	Voltage (V)	Pin No.	Voltage (V)
1	Clock 2.9	15	0
2	0	16	5
3	0	17	5
4	Pulse 2.6	18	Pulse 2.5
5	5	19	0
6	0	20	Pulse 2.5
7	5	21	5
8	Pulse 2.4	22	5
9	Pulse 2.4	23	Pulse 2.5
10	0	24	0
11	5	25	Pulse 2.5
12	0	26	5
13	N. C.	27	5
14	Clock 4.9	28	Clock 2.5

SUB UNIT
(RWZ2863:PDC-P530M)
(RWZ2855:PDC-P530)

MAIN UNIT
(RWZ2862:PDC-P530M)
(RWZ2854:PDC-P530)

I-MECHA

II-MECHA

PB AMP

BIAS OSC

REC EQ AMP

DOLBY B/C NR

ALC

IC201 HA12142NT

IC523 SN74LS05N

IC412 MC14066BCP

IC431 (1/2) NJM4558DX

IC431 (2/2) NJM4558DX

IC522 (2/2) NJM4558DX

IC523 NJM4558DX

T581 ATX-843

Q583 DTA124ES

Q584 2SC3243

2SA1203

Q829 DTC144ES

Q805 DTA124ES

Q881 DTC124ES

Q882 DTA124ES

Q883 DTC143ES

Q822 DTA124ES

Q823 DTC124ES

CN1

CN2

CN11

CN12

CN14

CN26

MODE PB REC PROHIBIT
VOLTAGE VE5 0 VA5

MODE OFF B C
VOLTAGE VE5 0 VA5

REC LEVEL ADJ
Lch: VR531
Rch: VR532

TP1 DOLL
TP2 DOLR

TP301
RF
TRER
TRIN
GNDD
FOIN
FOER

RKP-533

PICKUP ASS'Y

HOLOGRAM LASER UNIT

PREAMP BOARD ASS'Y

IC101 M51593FP

CN102

CN21

SERVO MECHANISM ASS'Y

SPINDLE MOTOR

CARRIAGE MOTOR

OUTSIDE COIL TRACKING INSIDE

FAR COIL FOCUS NEAR

SHORT LAND

LD POWER

INSIDE SW S610 DSG1016

CN610

CN22

IC306 (1/3) LA6520

IC306 (2/3) LA6520

IC306(2/3): FOCUS DRIVE

IC306 (3/3) LA6520

IC306(3/3) CARRIAGE DRIVE

IC301 CXA1372Q SERVO CONTROL

CN23

CN24

S601 CLAMP SW DSK1003

LOADING MOTOR PXM1010

LOADING PCB ASS'Y

S601
S602
MOTOR ASS'Y (LOADING) PEA1130

S603-S606 DSG1016

SELECT PCB ASS'Y

CN602

MOTOR ASS'Y (DISC SELECT) PEA1130

MOTOR PCB ASS'Y

PDC-P530

PDC-P530M

IC307 (2/3:PDC-P530M) (2/2:PDC-P530): LOADING DRIVE

IC307 (2/2) LA6517 Pin No.: O MARK PDC-P530

IC307 (2/3) LA6520

IC307 (3/3) LA6520

IC307(3/3): DISC SELECT DRIVE

CD TEST JP902

JP901

CD CONTROL

IC305 PD4461A PDC-P530

PD4461A PDC-P530M

X901 VSS1828-T 4.19MHz

RA8T473J 47K

: PB
: REC
(L) : LOADING SERVO LOOP
(T) : TRACKING SERVO LOOP
(F) : FOCUS SERVO LOOP
(S) : SPINDLE SERVO LOOP
(C) : CARRIAGE SERVO LOOP
(D) : DISC SELECT SERVO LOOP
▶ : TEST POINT

CONT UNIT
(RWZ2870 : PDC-P530M)
(RWZ2866 : PDC-P530)

IC801
PD3284A

IC801:
TC CONTROL

I-MECHA
RYM1189

II-MECHA
RYM1190

CN01
SBRA17S-JC

TO SX-P530

IC302
CXD2500BQ
DECODER

IC701
SM6871AS

IC701:
1bit DAC

IC702(1/2, 2/2):
LOW PASS FILTER

IC101-IC104:
REGULATOR

PDC-P530
PDC-P530M

	S1109
PDC-P530	OPEN/CLOSE
PDC-P530M	EJECT

: PB
: REC
(L) : LOADING SERVO LOOP
(T) : TRACKING SERVO LOOP
(F) : FOCUS SERVO LOOP
(S) : SPINDLE SERVO LOOP
(C) : CARRIAGE SERVO LOOP
(D) : DISC SELECT SERVO LOOP
▶ : TEST POINT

IC801
PD3204A

IC801:
TC CONTROL

I-MECHA
RYM1189

II-MECHA
RYM1190

CN14
CN28
52257-1210

CN01
5BRA175-JC

TO SX-P530

CONT UNIT
(RWZ2870 : PDC-P530M)
(RWZ2866 : PDC-P530)

CN25
J1003
PDC-P530M

PDC-P530

PDC-P530M

IC302
CXD2500BQ
DECODER

IC701
SM5871AS
1bit DAC

IC702(1/2, 2/2):
LOW PASS FILTER

IC101-IC104:
REGULATOR

	S1109
PDC-P530	OPEN/CLOSE
PDC-P530M	EJECT

P.C.B. pattern diagram indication	Corresponding part symbol	Part name	P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor			Ceramic capacitor
		FET			Mylar capacitor
		Diode			Styrol capacitor
					Electrolytic capacitor (Non polarized)
					Electrolytic capacitor (Noiseless)
		Zenner diode			Electrolytic capacitor (Polarized)
					Electrolytic capacitor (Polarized)
		LED			Power capacitor
		Varactor			Semi-fixed resistor
		Tact switch			Resistor array
					Resistor
		Inductor			
		Coil			Resonator
		Transformer			Thermistor
		Filter			

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with ○ shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.

SELECT PCB ASS'Y

S608 S605 S603 S604 J602

LOADING PCB ASS'Y

S601 S602 CN601

MOTOR PCB ASS'Y

J602 CN602

PDC-P530M

SERVO MECHANISM ASS'Y

INSIDE SW S610 SPINDLE MOTOR CN610 CARRIAGE MOTOR

PICKUP ASS'Y

HOLOGRAM LASER UNIT

PREAMP BOARD ASS'Y

CN102

PDC-P530

S601 CLAMP SW

LOADING MOTOR

MAIN UNIT

CN27 CN28 CN24 CN26 CN21 CN01 CN25

IC522 IC104 Q103 Q102 IC201 IC523 IC102 Q523 IC101 Q524 Q481 Q493 IC501 Q494 Q491 Q492 Q482 Q906 Q905 Q904 Q903 IC305 IC702 Q902 IC701 IC307 Q901 IC301 IC306 IC302 VR301 VR302

VR522 VR521

II-MECHA RYM1190

I-MECHA RYM1189

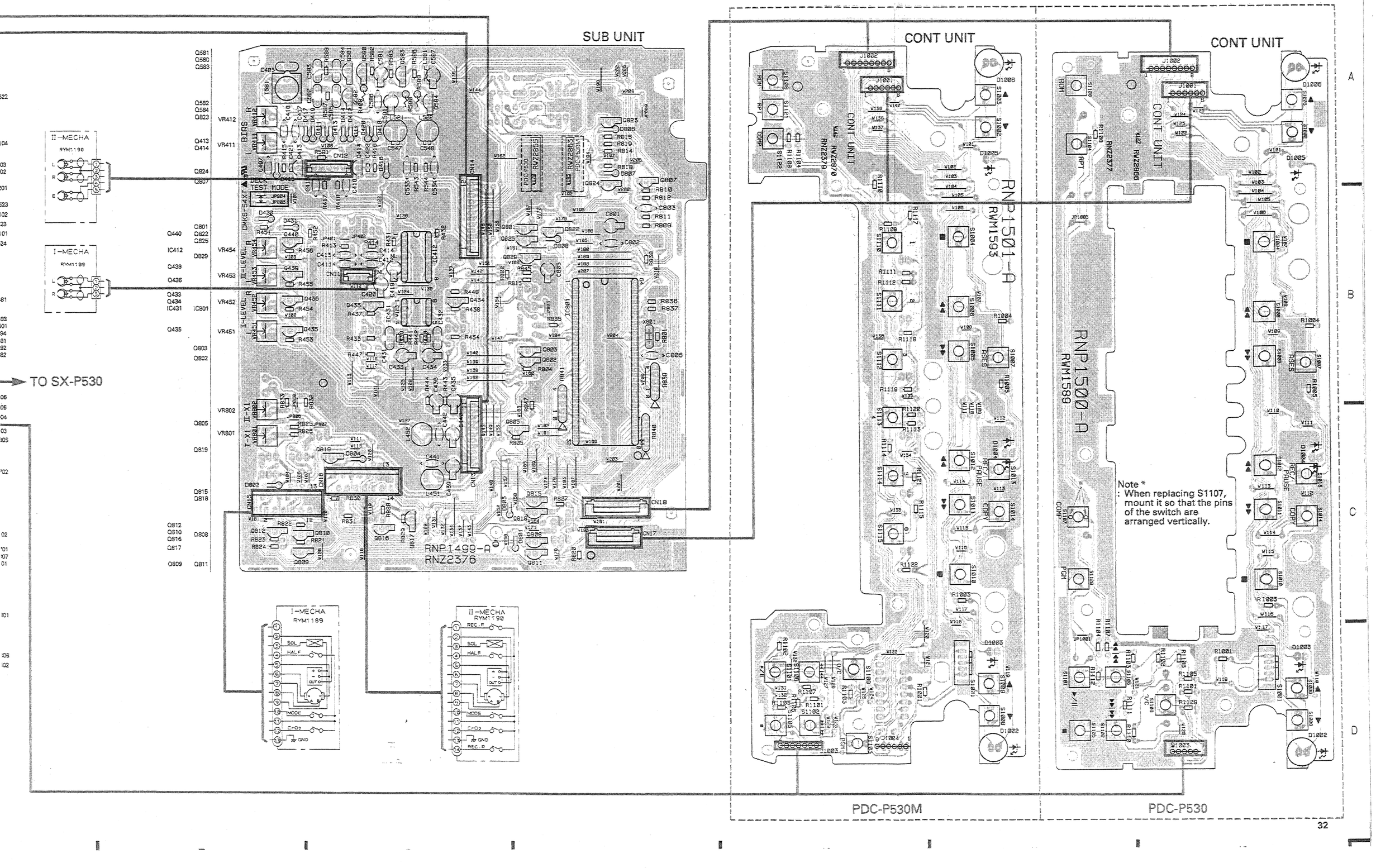
TO SX-P530

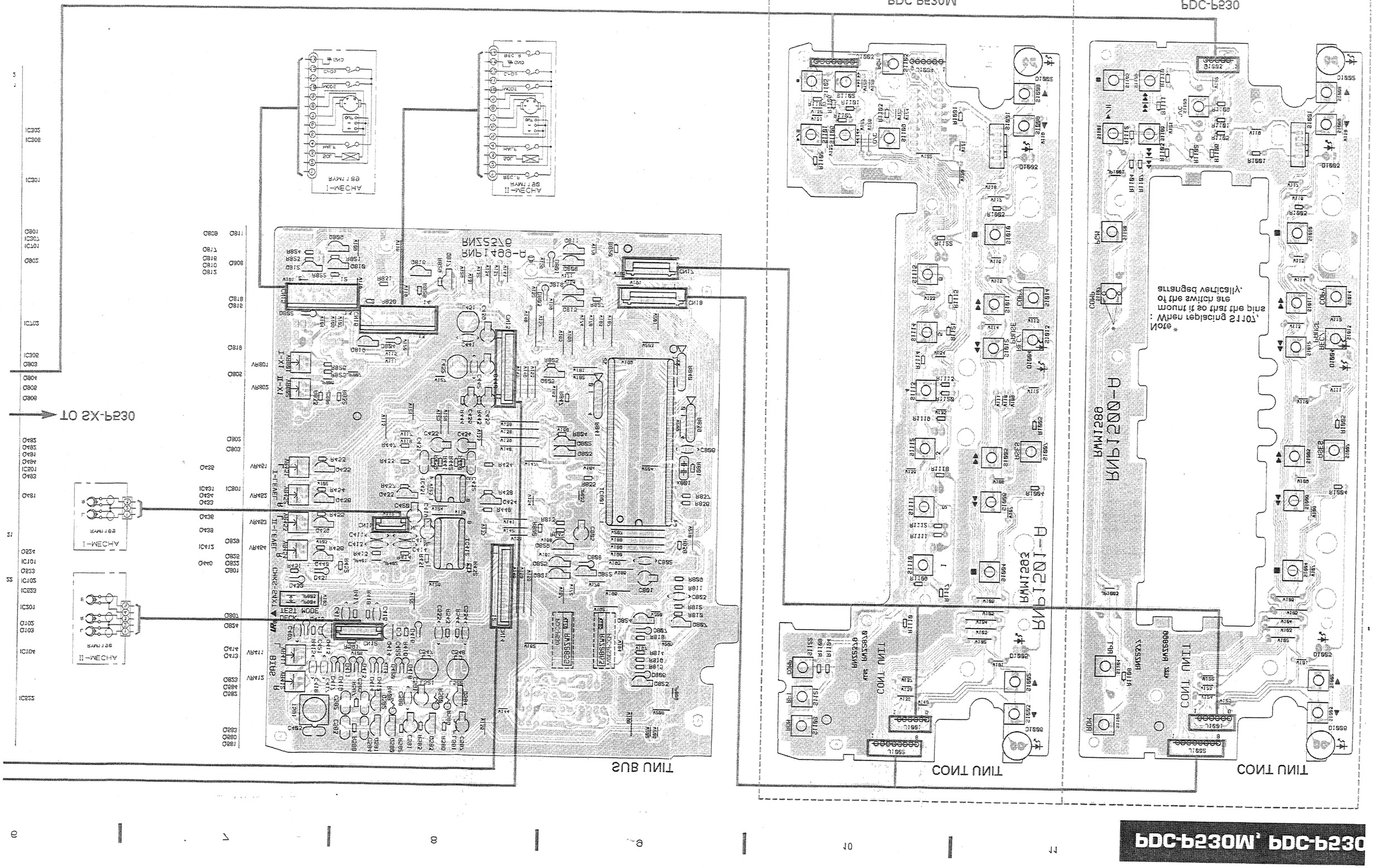
RWM1583 RVZ2654 PDC-P530

RWM1587 RVZ2662 PDC-P530M

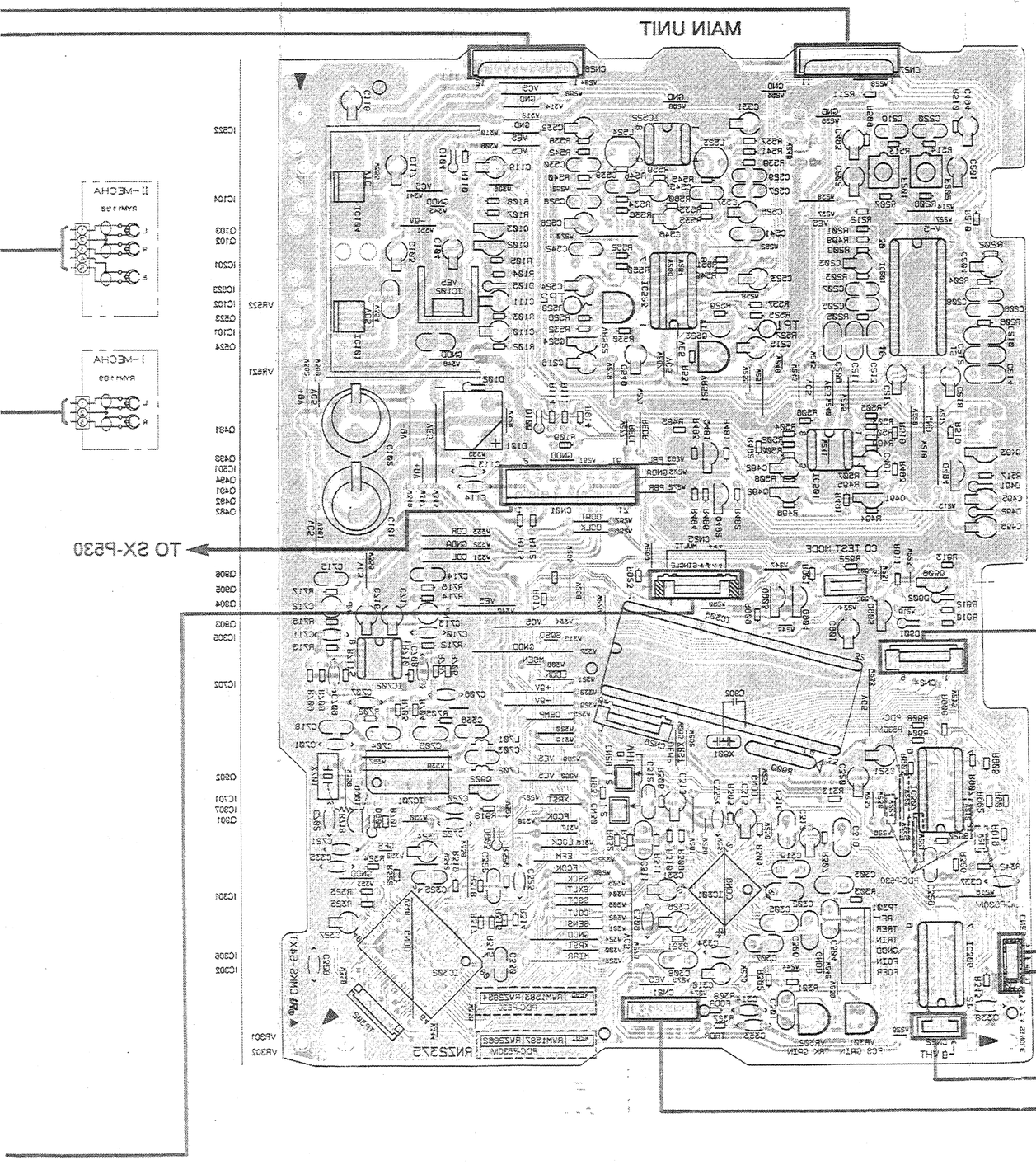
RNZ2375

This PCB connection diagram is viewed from parts mounted side.


7
8
9
10
11
A
B
C
D
SUB UNIT
CONT UNIT
CONT UNIT
RNP1499-A
RNZ2376
RNP1501-A
RWM1593
RNP1500-A
RWM1589
RNZ2370
RNZ2377
RNZ2966
II-MECHA
RYM1190
I-MECHA
RYM1189
TO SX-P530
BIAS R
BIAS L
II-LEVEL R
I-LEVEL R
II-X1
I-X1
DECK TEST MODE
CMKS-54X
PDC-P530M
PDC-P530
Note *
: When replacing S1107, mount it so that the pins of the switch are arranged vertically.



PDC-P230M, PDC-P230



PCB pattern diagram: Indication	Corresponding part: symbol	PCB pattern diagram: Indication	Part name	Corresponding part: symbol	Part name
			Transistor		Ceramic capacitor
			FET		Mylar capacitor
			Diode		Styrol capacitor
					Electrolytic capacitor (Non polarized)
			Zener diode		Electrolytic capacitor (Polarized)
					Electrolytic capacitor (Polarized)
			LED		Power capacitor
			Varactor		Semi-fixed resistor
			Tact switch		Resistor array
			Inductor		Resistor
			Coil		Resonator
			Transformer		Thermistor
			Filter		

1. This PCB connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ⌒ shows negative terminal.
4. The diode marked with ○ shows cathode side.
5. The transistor terminal marked with ⌒ shows emitter.

This PCB connection diagram is viewed from the foil side.

6. ADJUSTMENTS

6.1 DECK SECTION

6.1.1 Mechanism Section

1. Adjustment and verification of the tape speed						
No.	Deck	Mode	Test tape	Adjustment point	Standard value (playback frequency)	Remarks
1	II	Normal-speed playback	STD-301E (3 kHz)	VR802	3020 Hz ±5 Hz (TP1 or TP2)	
2	I			VR801	±5 Hz with respect to the value verified in Step 1 (DECK II)	

Note. TP1 or TP2: refer to Fig. 7.

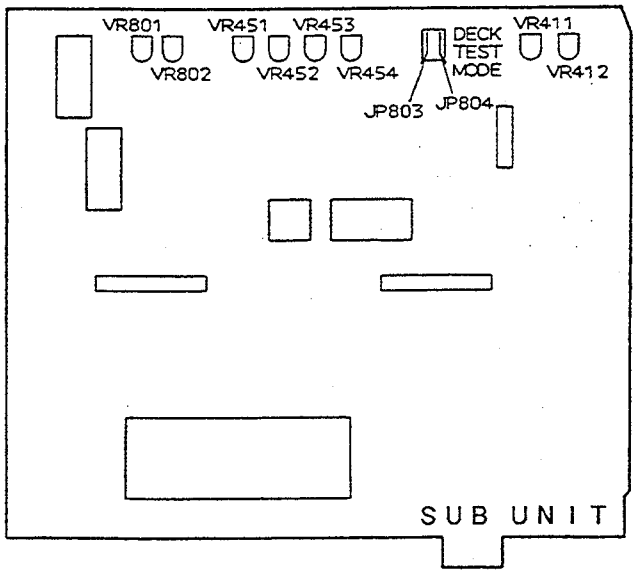


Fig. 1 Adjustment Locations

● Verification and adjustment of the door damper

1. Attach the door spring to the position (a) shown in Fig. 2 and stand the front panel assembly vertically as shown in Fig. 3.
2. Open the doors of DECK I and DECK II simultaneously. When one of the doors fully opens, check that the difference in position from the other door is within 15 mm.
3. If the requirement mentioned in Step 2 is not satisfied, change and adjust the attaching position of the door spring as follows.
   - If the door of DECK I opens more slowly than that of DECK II:
     Change the position of the door spring for DECK I to (b).
   - If the door of DECK I opens faster than that of DECK II:
     Change the position of the door spring for DECK II to (b).

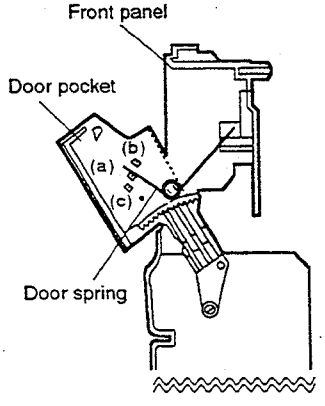


Fig. 2

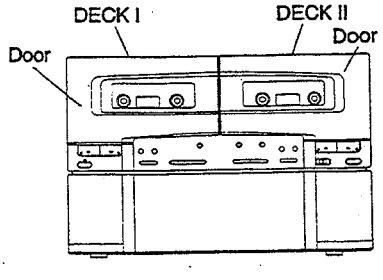


Fig. 3

6.1.2 Electrical Adjustment

Requirements for adjustments

1. Mechanical adjustments have been completed.
2. The heads have been cleaned and demagnetized.
3. Wait for a few minutes before making the adjustments.
4. The signal level must be 0 dBV = 1 Vrms.
5. Connect a load resistance of 50 kΩ (or between 47 k to 52 kΩ)to pin 14 and pin 15 of CN101. *1
6. Set the DOLBY NR switch to OFF unless otherwise specified

Test tapes

For adjustments of the playback system:
STD-331E (Fig. 4)
NORMAL blank tape: STD-631
CrO2 blank tape: STD-621

Note: The reference recording level of the STD - 331E is 250 nwb/m, which is 4 dB higher than that of STD - 331B (160 nwb/m) in recording. Be sure to check the tape type before adjustment.

- Playback system
1. Head azimuth adjustment
2. Playback level adjustment

- Recording system
1. Recording bias adjustment
2. Recording level adjustment

The automatic tape selector mechanism is incorporated.

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(NOTE) *1:

- If servicing jig GGF1148 is used, a load of approximately 60KΩ is required.
- If a specified system component is connected, it is not required.

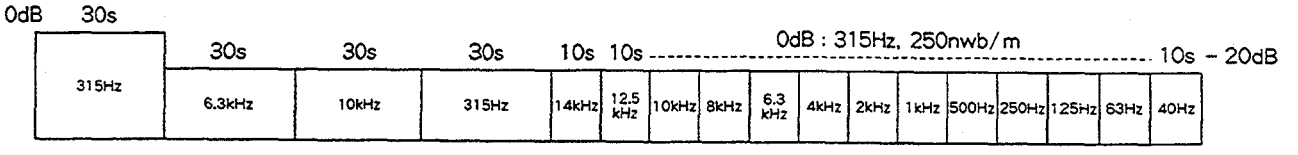


Fig. 4 Test tape STD-331E

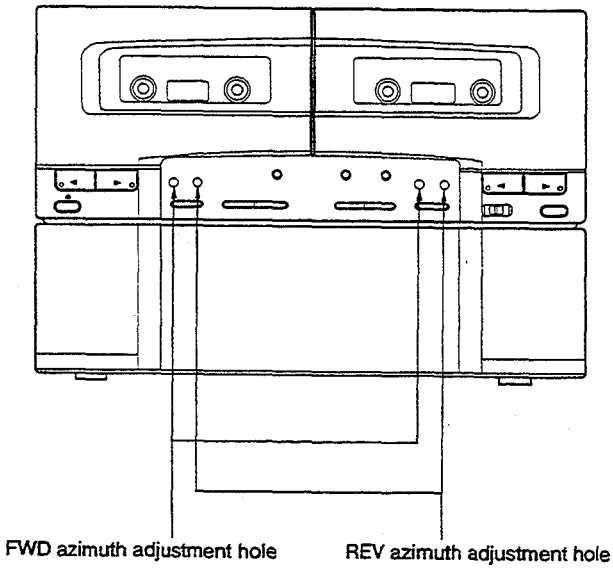


Fig.5 Head azimuth adjustment

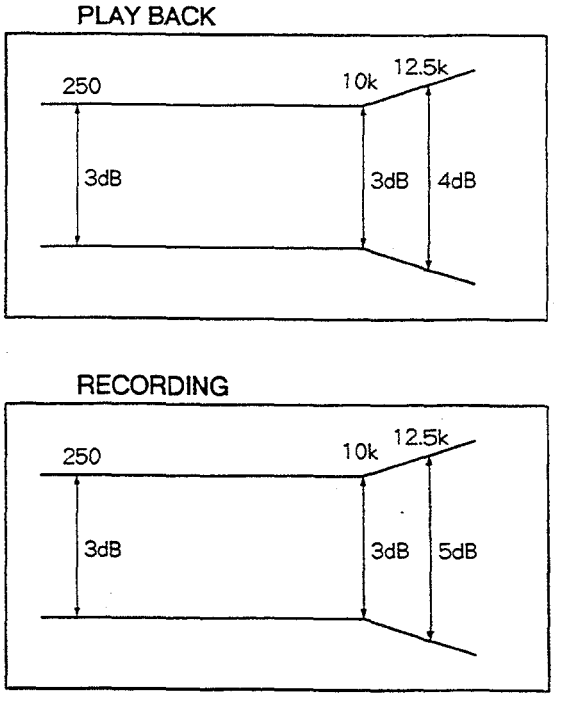


Fig. 6 Frequency response

Playback system

1. Head azimuth adjustmment

No.	Mode	Input signal/test tape	Adjusting point	Measuring point	Adjustment value	Remarks
1	PLAY	Play 10 kHz/-20 dB of the STD-331E test tape.	Head azimuth adjustment screw (Fig. 5)	Pins 14 or 15 of CN01	Maximum playback signal level	
2	STOP	When the adjustment is completed, apply adhesive to secure the screws.				

2. Playback level adjustment

No.	Mode	Input signal/test tape	Adjusting point		Measuring point	Adjustment value	Remarks
1	PLAY	Play 315 Hz/0 dB of the STD-331E test tape.	DECK I	VR451 (L ch)	TP1 (L ch) TP2 (R ch)	-9.5 dBV	This adjustment must be accurate, as it determines the DOLBY level.
				VR452 (R ch)			
			DECK II	VR453 (L ch)			
				VR454 (R ch)			

Note: TP1 and TP2 are located in the MAIN unit. See Fig. 7 - Adjusting points in "6.2 CD section."

Recording system

Perform these adjustments in test mode.

- To activate the test mode : Turn on power while short-circuiting JP803 and JP804 in the SUB unit. Use the GGF1148 power control jig and the GGF1171 connection adapter for servicing.

1. Recording bias adjustment

No.	Mode	Input signal/test tape	Adjusting point		Measuring point	Adjustment value	Remarks
1	REC/ PAUSE	Apply a signal to the line input from an external oscillator and adjust the oscillator so that the line output is 315 Hz/-26 dBV. Then load the STD-631 (NORM) tape.	The output level control of the oscillator		Pins 14 or 15 of CN01	-26 dBV	
2	REC → PLAY	Record the 315 Hz and 6.3 kHz signals at the above-mentioned level and reproduce the recorded signals.	DECK II	VR411 (L ch)		Repeat the recording and playback operations for compensation until the playback level of the 6.3 kHz signal is +0.5 dB ± 0.5 dB with respect to that of the 315 Hz signal.	
				VR412 (R ch)			
3	When the adjustment is completed, check the distortion to eliminate underbiasing.						

Note: • Line input: Pin 16 (L ch) or pin 17 (R ch) of CN01.
• Line output: Pin14 (L ch) or pin 15 (R ch) of CN01

2. Recording level adjustment

No.	Mode	Input signal/test tape	Adjusting point		Measuring point	Adjustment value	Remarks
1	REC/ PAUSE	Load the STD-631 (NORM) tepe and apply a 315 Hz signal to the line input from an external oscillator.	The output level control of the oscillator		TP1 (L ch) TP2 (R ch)	-13.5 dBV	
2	REC → PLAY	Record the above-mentioned input signal and reproduce the recorded signal.	DECK II	VR521 (L ch)		Repeat the recording and playback operations for compensation until the playback level is -13.5 dBV.	
				VR522 (R ch)			
3	REC → PLAY	Record the above-mentioned input signal on the STD-621 (CrO_2) tape and reproduce the recorded signal.	Verification			-13.5 dBV ± 1.5 dB	

Note: • VR521 and VR522 are located in the MAIN unit. See Fig. 7 – Adjusting points in "6.2 CD section."

6.2 CD PLAYER SECTION

● Adjustment Methods

If a disc player is adjusted incorrectly or inadequately, it may malfunction or not work at all even though there is nothing at all wrong with the pickup or the circuitry. Adjust correctly following the adjustment procedure.

● Adjustment Items/Verification Items and Order

If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in steps 1 − 4, the pickup block may be defective.

Step	Item	Test Point	Adjustment Location
1	Focus offset verification	TP301, Pin 6 (FCS. ERR)	None
2	Tracking error balance verification	TP301, Pin 2 (TRK. ERR)	None
3	Pickup radial/tangential direction tilt adjustment	TP301, Pin 1 (RF)	Radial tilt adjustment screw, Tangential tilt adjustment screw
4	RF level verification	TP301, Pin 1 (RF)	None
5	Focus servo loop gain adjustment	TP301, Pin 5 (FCS. IN) TP301, Pin 6 (FCS. ERR)	VR301 (FCS.GAN)
6	Tracking servo loop gain adjustment	TP301, Pin 3 (TRK. IN) TP301, Pin 2 (TRK, ERR)	VR302 (TRK.GAN)

● **Abbreviation table**

FCS. ERR :Focus Error
TRK. ERR :Tracking Error
FCS GAN :Focus Gain
TRK GAN :Tracking Gain
FCS. IN :Focus In
TRK. IN :Tracking In

● Measuring Instruments and Tools

1. Dual trace oscilloscope (10: 1 probe)
2. Low-frequency oscillator
3. Test disc (YEDS-7)
4. 8-cm disc (with at least about 20 minutes recording)
5. Low-pass filter (39 kΩ + 0.001 μF)
6. Resistor (100 kΩ)
7. Ballpoint hexagon wrench (GGK1002)
8. Standard tools

● Test Point and Adjustment Variable Resistor Positions

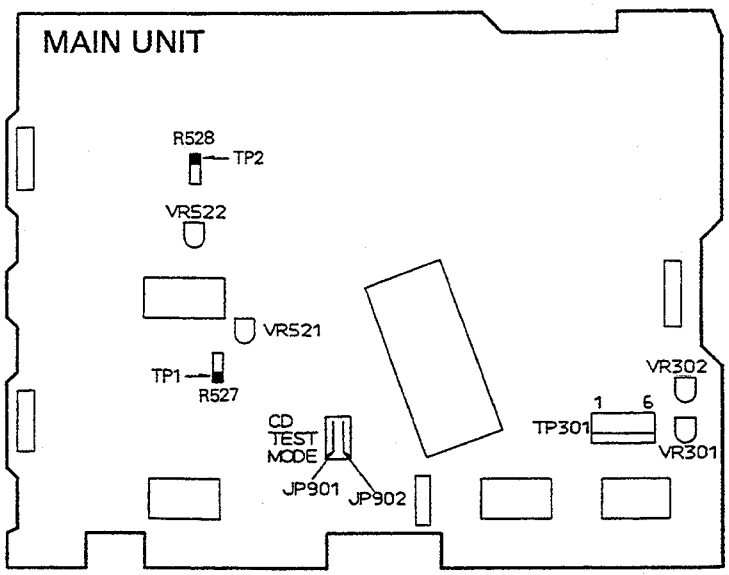


Fig. 7 Adjustment Locations

● Notes

1. Use a 10:1 probe for the oscilloscope.
2. All the knob positions (settings) for the oscilloscope in the adjustment procedures are for when a 10:1 probe is used.

● Test Mode

These models have a test mode so that the adjustments and checks required for service can be carried out easily. When these models are in test mode, the keys on the front panel work differently from normal. Adjustments and checks can be carried out by operating these keys with the correct procedure. For these models, all adjustments are carried out in test mode.

[Setting these models to test mode]

How to set this model into test mode.

1. Turn of the power switch.
2. Short the test mode jumper wires. (See Fig. 7)
3. Turn on the power switch.

When the test mode is set correctly, the display is different from what it usually is when the power is turned on. If the display is still the same as usual, test mode has not been set correctly, so repeat Steps 1 – 3.

[Release from test mode]

Here is the procedure for releasing the test mode:

1. Press the STOP key and stop all operations.
2. Unplug the power cord from the AC socket.

[Operations of the keys in test mode]

Code	Key Name	Function in Test Mode	Explanation
	PGM (PROGRAM)	Focus servo close	The laser diode is lit up and the focus actuator is lifted up, then lowered slowly and the focus servo is closed at the point where the objective lens is focused on the disc. With the player in this state, if you lightly rotate the stopped disc by hand, you can hear the sound the focus servo. If you can hear this sound, the focus servo is operating correctly. If you press this key with no disc mounted, the laser diode lights up, the focus actuator is pulled up, then the actuator is lowered and raised three times and returned to its original position.
▷/ ▯▯	PLAY/PAUSE	Spindle servo ON	Starts the spindle motor in the clockwise direction and when the disc rotation reaches the prescribed speed (about 500 rpm at the inner periphery), sets the spindle servo in a closed loop. Be careful. Pressing this key when there is no disc mounted makes the spindle motor run at the maximum speed. If the focus servo does not go correctly into a closed loop or the laser light shines on the mirror section at the outermost periphery of the disc, the same symptom is occurred.
		Tracking servo close/open	Pressing this key when the focus servo and spindle servo are operating correctly in closed loops puts the tracking servo into a closed loop, displays the track number being played back and the elapsed time on the front panel, and outputs the playback signal. If the elapsed time is not displayed or not counted correctly or the audio is not played back correctly, it may be that the laser is shining on the section with no sound recorded at the outer edge of the disc, that something is out of adjustment, or that there is some other problem. This key is a toggle key and open/close the tracking servo alternately. This key has no effect if no disc is mounted.

Code	Key Name	Function in Test Mode	Explanation
⏪ · ⏮	MANUAL/ TRACK SEARCH REV	Carriage reverse (inwards)	Moves the pickup position toward the inner diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
⏭ · ⏩	MANUAL/ TRACK SEARCH FWD	Carriage forward (outwards)	Moves the pickup position toward the outer diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
⏹	STOP	Stop	Initializes and the disc rotation stops. The pickup and disc remain where they are when this key is pressed.
	*1 OPEN/ CLOSE	Disk tray open/close	Opens/closes the disc tray This key toggles between open and close for the disc tray. If the key is pressed while the disc is rotating, the tray is opened when the rotation stops. This key operation does not affect the pick-up position.
	*2 OPEN/ EJECT	(CD magazine) eject	Houses the disc within the magazine and ejects the CD magazine. However, the pick-up will not return to the innermost track after an ejection. The pick-up stays in the same position even when the CD magazine is remounted.
	REPEAT	Carriage shift (toward the center)	Shifts the carriage toward the center of the 12 cm disc (R=35 mm). If this key is pressed in the focus-in, spindle-servo-on state, the carriage shifts toward the center of the 12 cm disc after returning to the inside track.

Note: In the case of a magazine-type CD, disc 1 will be automatically loaded when the magazine is mounted.

*1 : PDC-P530
*2 : PDC-P530M

[How to play back a disc in test mode]

In test mode, since the servos operate independently, playing back a disc requires that you operate the keys in the correct order to close the servos.
Here is the key operation sequence for playing back a disc in test mode.

PGM(PROGRAM)	Lights up the laser diode and closes the focus servo.
⇩	
PLAY/PAUSE ▷/II	Starts the spindle motor and closes the spindle servo.
⇩	
PLAY/PAUSE ▷/II	Closes the tracking servo.

Wait at least 2-3 seconds between each of these operations.

1. Focus Offset Verification

● Objective ● Symptom when out of adjustment	Verify the DC offset for the focus error amp. The model does not focus in and the RF signal is dirty.		
● Measurement instrument connections	Connect the oscilloscope to TP301, Pin 6 (FCS. ERR) [Settings] 5 mV/division 10 ms/division DC mode	● Player state ● Adjustment location ● Disc	Test mode, stopped (just the Power switch on) None None needed
[Procedure] Verify the DC voltage at TP301, Pin 6 (FCS. ERR) is 0 ± 50 mV.			

Note : If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in adjustment items 1 – 4, the pickup block may be defective.

2. Tracking Error Balance Verification

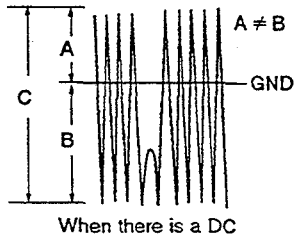
● Objective ● Symptom when out of adjustment	To verify that there is no variation in the sensitivity of the tracking photo diode. Play does not start or track search is impossible.		
● Measurement instrument connections	Connect the oscilloscope to TP301, Pin2 (TRK. ERR). This connection may be via a low pass filter. [Settings] 50 mV/division 5 ms/division DC mode	● Player state ● Adjustment location ● Disc	Test mode, focus and spindle servos closed and tracking servo open None YEDS-7

[Procedure]

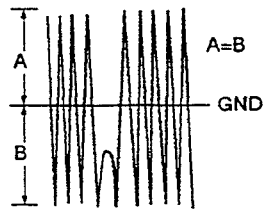
1. Move the pickup to midway across the disc (R=35 mm) with the TRACK/MANUAL SEARCH FWD ▷▷ · ▷▷| or REV |◁◁ · ◁◁ key.
2. Press the PGM (PROGRAM) key, then the PLAY/PAUSE ▷/ ▯▯ key in that order to close the focus servo then the spindle servo.
3. Line up the bright line (ground) at the center of the oscilloscope screen and put the oscilloscope into DC mode.
4. Supposing that the positive amplitude of the tracking error signal at TP301, pin 2 (TRK ERR) is (A) and the negative amplitude is (B), the following expression is satisfied.

When $A \geqq B$, $\frac{A-B}{C} \times \frac{1}{2} \leqq 0.1$

When $A < B$, $\frac{B-A}{C} \times \frac{1}{2} \leqq 0.1$



When there is a DC component



When there is no DC component

3. Pickup Radial/Tangential Tilt Adjustment

● Objective	To adjust the angle of the pickup relative to the disc so that the laser beams are shone straight down into the disc for the best read out of the RF signals.		
● Symptom when out of adjustment	Sound broken;some discs can be played but not others.		
● Measurement instrument connections	Connect the oscilloscope to TP301, Pin 1 (RF). [Settings] 20 mV/division 200 ns/division AC mode	● Player state ● Adjustment location ● Disc	Test mode, play Pickup radial tilt adjustment screw and tangential tilt adjustment screw YES-7(PDC-P530M) 8-cm disc(PDC-P530)

[Procedure]

Note:Value in [ ] is adjustment condition for PDC-P530M.

1. Press the TRACK/MANUAL SEARCH FWD ▷▷ · ▷▷| or REV |◁◁ · ◁◁ key to move the pickup to halfway across the disc [R=35mm].
   Press the PGM (PROGRAM) key, the PLAY/PAUSE ▷ / ▯▯ key, then the PLAY/PAUSE ▷/ ▯▯ key in that order to close the respective servos and put the player into play mode.
2. First,adjust the radial tilt adjustment screw with the hexagon wrench (GGK1002) [Phillips screwdriver] so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly.
3. Next,adjust the tangential tilt adjustment screw with the hexagon wrench (GGK1002)[Phillips screwdriver] so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly (Fig.9).
4. Adjust the radial tilt adjustment screw and the tangential tilt adjustment screw again so that the eye pattern can be seen the most clearly. As necessary, adjust the two screws alternately so that the eye pattern can be seen the most clearly.
5. When the adjustment is completed, lock the radial and tangential adjustment screw.

Note:Radial and tangential mean the directions relative to the disc shown in Fig. 8.

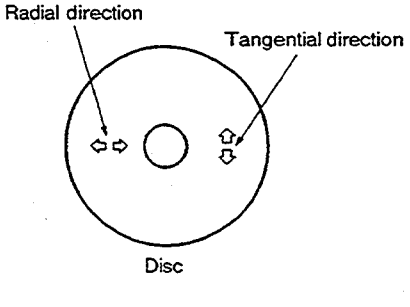
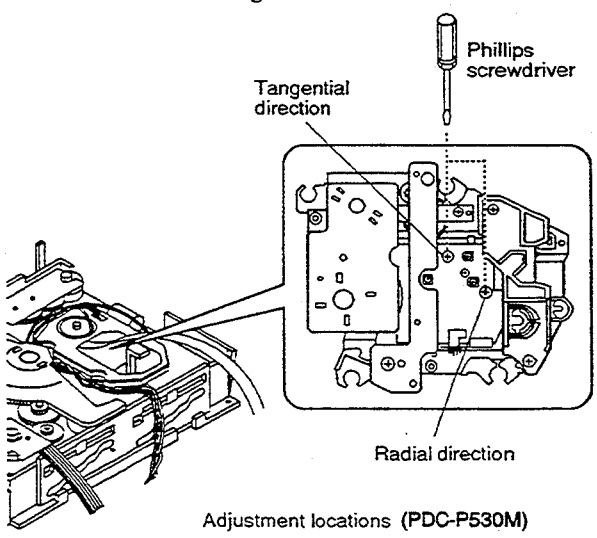
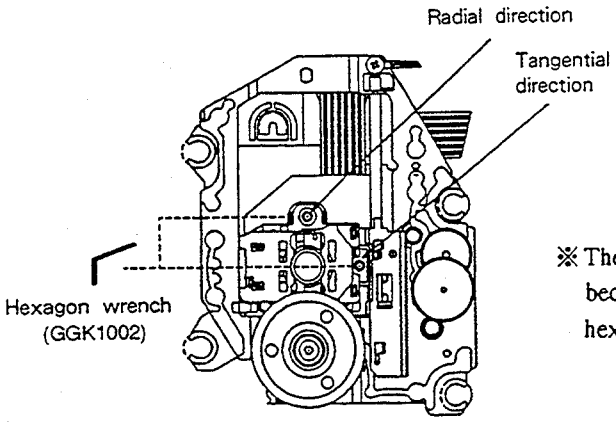


Fig.8



Adjustment locations (PDC-P530M)



Adjustment locations (PDC-P530)

※ The ball-point type hexagon wrench is used because the disc will get in the way if a normal hexagon wrench is used.

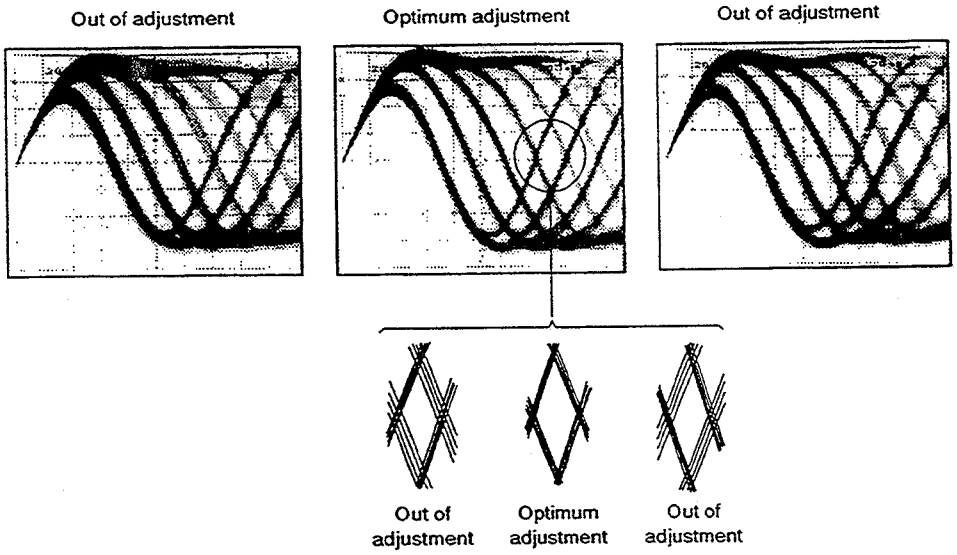


Fig. 9 Eye pattern

4. RF Level Verification

● Objective ● Symptom when out of adjustment	To verify the playback RF signal amplitude No play or no search		
● Measurement instrument connections	Connect the oscilloscope to TP301, Pin 1 (RF). [Settings] 50 mV/division 10 ms/division AC mode	● Player state ● Adjustment location ● Disc	Test mode, play None YEDS-7

[Procedure]

1. Move the pickup to midway across the disc (R=35 mm) with the TRACK/MANUAL SEARCH FWD ▷▷ · ▷▷| or REV |◁◁ · ◁◁ key, then press the PGM (PROGRAM) key, the PLAY/PAUSE ▷/ ▯▯ key, then the PLAY/PAUSE ▷/ ▯▯ key in that order to close the respective servos and put the player into play mode.
2. Verify the RF signal amplitude is 1.2 Vp-p ± 0.2 V.

5. Focus Servo Loop Gain Adjustment

● Objective	To optimize the focus servo loop gain.		
● Symptom when out of adjustment	Playback does not start or focus actuator noisy.		
● Measurement instrument connections	See Fig. 10. [Settings] CH1 CH2 20 mV/division 5 mV/division X-Y mode	● Player state ● Adjustment location ● Disc	Test mode, play VR301 (FCS. GAN) YEDS-7

[Procedure]

1. Set the AF generator output to 1.2 kHz and 1 Vp-p.
2. Press the MANUAL SEARCH FWD ▷▷ or REV ◁◁ key to move the pickup to halfway across the disc (R=35 mm), then press the PGM (PROGRAM) key, the PLAY ▷ key, then the PAUSE ▯▯ key in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR301 (FCS. GAN) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

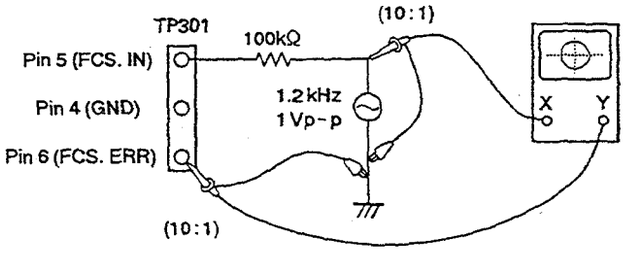
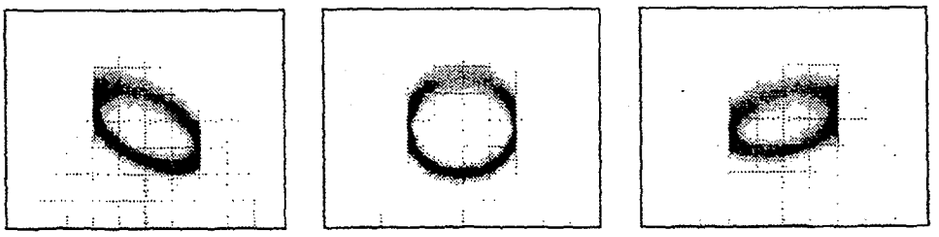


Fig. 10

Focus Gain Adjustment



Higher gain | Optimum gain | Lower gain

6. Tracking Servo Loop Gain Adjustment

● Objective	To optimize the tracking servo loop gain.		
● Symptom when out of adjustment	Playback does not start, during searches the actuator is noisy, or tracks are skipped.		
● Measurement instrument connections	See Fig. 11. [Settings] CH1 CH2 50 mV/division 20 mV/division X-Y mode	● Player state ● Adjustment location ● Disc	Test mode, play VR302 (TRK. GAN) YEDS-7

[Procedure]

1. Set the AF generator output to 1.2 kHz and 2 Vp-p.
2. Press the TRACK/MANUAL SERACH FWD ▷▷ · ▷▷| or REV |◁◁ · ◁◁ key to move the pickup to halfway across the disc (R=35 mm), then press the PGM (PROGRAM) key, the PLAY/PAUSE ▷/ ▯▯ key, then the PLAY/PAUSE ▷/ ▯▯ key in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR302 (TRK. GAN) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

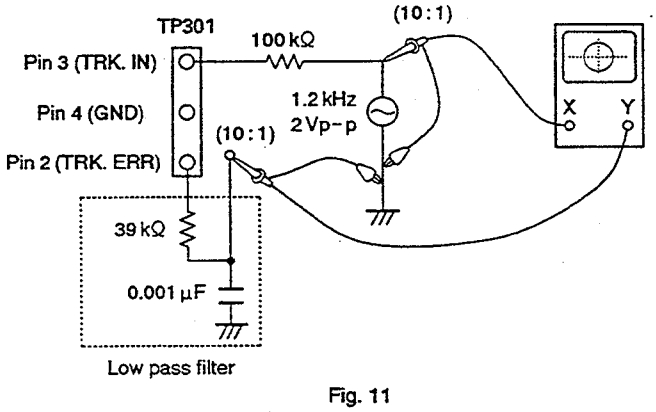
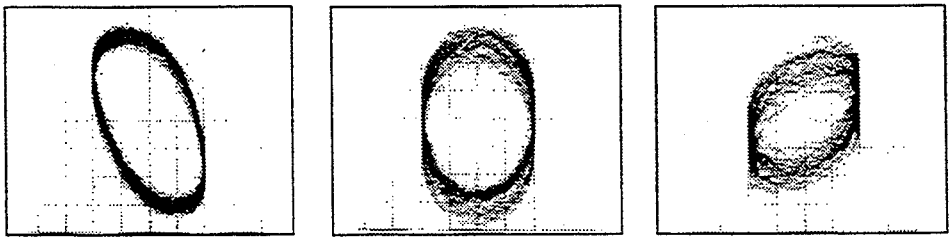


Fig. 11

Tracking Gain Adjustment

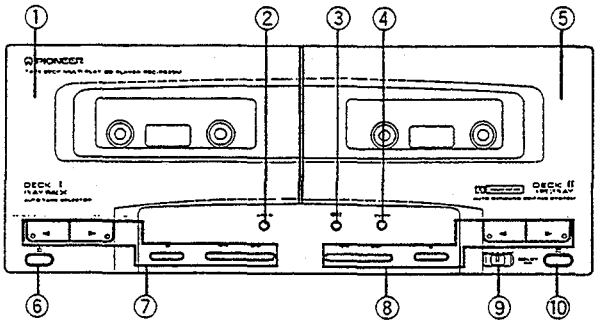


Higher gain | Optimum gain | Lower gain

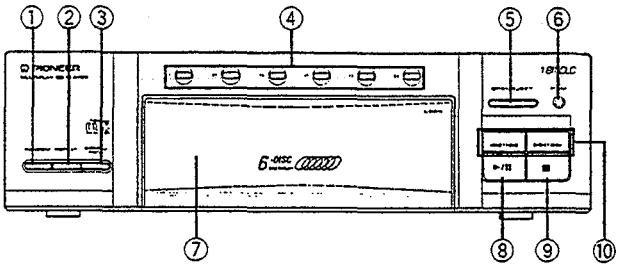
7. PANEL FACILITIES

PDC-P530M

TAPE DECK



MULTI-PLAY CD PLAYER



TAPE DECK

① Deck I cassette door
② ASES (Auto Synchro Editing System) button
③ Rec Pause button (●II)
④ COPY button
⑤ Deck II cassette door
⑥ Deck I eject button (▲)
⑦ Deck I operation buttons (Play ◄ ►, Stop ■, Fast ◄◄ ►►)
⑧ Deck II operation buttons (Play ◄ ►, Stop ■, Fast ◄◄ ►►)
⑨ DOLBY* NR switch (B/OFF/C)
⑩ Deck II eject button (▲)

MULTI-PLAY CD PLAYER

① RANDOM button
② REPEAT button
③ COMPU PGM button
④ Disc number buttons (1 – 6)
⑤ OPEN/EJECT button
⑥ PGM (program) button
⑦ Magazine insertion slot door
⑧ Play/Pause button (►/II)
⑨ Stop button (■)
⑩ Manual/Track search buttons (◄◄ · I◄◄, ►►I · ►►)

*

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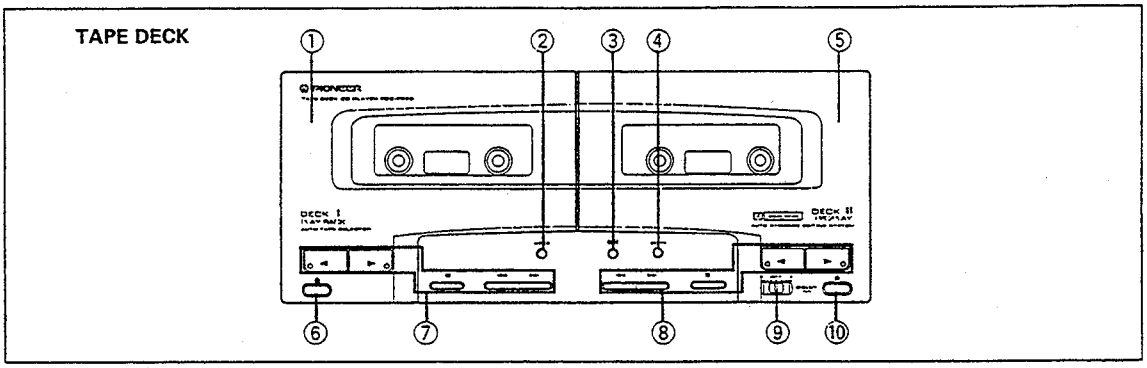
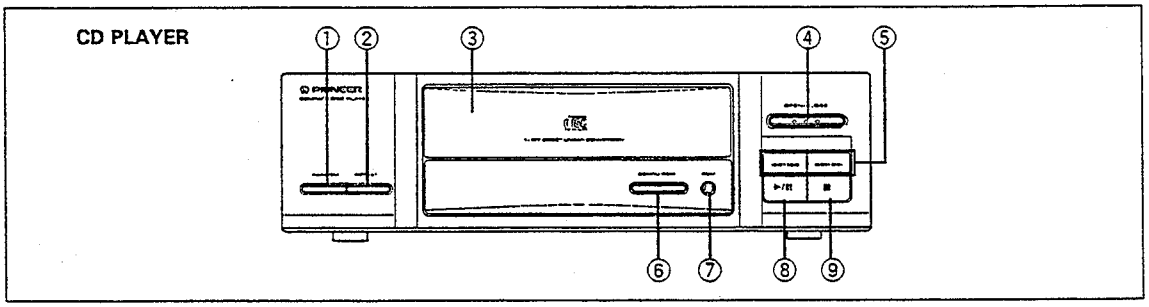
- *"DOLBY" and the double-D symbol ⊡⊡ are trademarks of Dolby Laboratories Licensing Corporation.*

PDC-P530





TAPE DECK

① **Deck I cassette door**
② **ASES (Auto Synchro Editing System) button**
③ **Rec Pause button (●II)**
④ **COPY button**
⑤ **Deck II cassette door**
⑥ **Deck I eject button (▲)**
⑦ **Deck I operation buttons (Play ◄ ►, Stop ■, Fast ◄◄ ►►)**
⑧ **Deck II operation buttons (Play ◄ ►, Stop ■, Fast ◄◄ ►►)**
⑨ **DOLBY* NR switch (B/OFF/C)**
⑩ **Deck II eject button (▲)**

CD PLAYER

① **RANDOM button**
② **REPEAT button**
③ **Disc tray**
④ **OPEN/CLOSE button**
⑤ **Manual/Track search buttons (◄◄ · ⊢◄◄, ►►⊣ · ►►)**
⑥ **COMPU PGM button**
⑦ **PGM (program) button**
⑧ **Play/Pause button (►/II)**
⑨ **Stop button (■)**

*

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8. SPECIFICATIONS

PDC-P530M

Cassette Deck Section

Systems ..... 4 track, 2-channel stereo
Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor ..... DC servo motor x 2
Wow and Flutter ..... No more than 0.09 % (WRMS)
Frequency Response (–20 dB recording):
TYPE I (Normal) tape ..... 35 Hz to 14,000 Hz ±6 dB
TYPE II (HIGH/CrO_2) tape ..... 35 Hz to 15,000 Hz ±6 dB
Signal-to-Noise Ratio ..... 56 dB
(peak recording level, audible compensation)
With Dolby B-type NR ON ..... More than 10 dB
(at 5 kHz)
With Dolby C-type NR ON ..... More than 19 dB
(at 5 kHz)

CD Section

Type ..... Compact disc digital audio system
Frequency Response ..... 4 Hz to 20 kHz
Signal to Noise Ratio ..... 96 dB or more (EIAJ)

Miscellaneous

Dimensions ..... 260 (W) x 180 (H) x 271 (D) mm
Weight (without package) ..... 4.3 kg

Accessories

6-compact disc magazine 1
Operating Instructions 1

NOTE:
Specifications and design subject to possible modification without notice due to improvements.

PDC-P530

Cassette Deck Section

Systems ..... 4 track, 2-channel stereo
Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor ..... DC servo motor x 2
Wow and Flutter ..... No more than 0.09 % (WRMS)
Frequency Response (–20 dB recording):
TYPE I (Normal) tape ..... 35 Hz to 14,000 Hz ±6 dB
TYPE II (HIGH/CrO_2) tape ..... 35 Hz to 15,000 Hz ±6 dB
Signal-to-Noise Ratio ..... 56 dB
(peak recording level, audible compensation)
With Dolby B-type NR ON ..... More than 10 dB
(at 5 kHz)
With Dolby C-type NR ON ..... More than 19 dB
(at 5 kHz)

CD Section

Type ..... Compact disc digital audio system
Frequency Response ..... 4 Hz to 20 kHz
Signal to Noise Ratio ..... 96 dB or more (EIAJ)

Miscellaneous

Dimensions ..... 260 (W) x 180 (H) x 271 (D) mm
Weight (without package) ..... 3.7 kg

Accessories

Operating Instructions 1